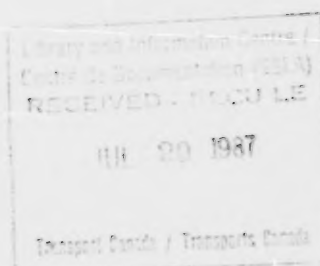




Transports
Canada
Centre de développement
des transports (CDT)

Transport
Canada
Transportation
Development Centre (TDC)

Bibliographie Rail de l'électrification Electrification du rail Bibliography



Société d'études et de consultation
du Canadien Pacifique (Ltée)

Canadian Pacific
Consulting Services Ltd.

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15. Remarques additionnelles			
17. Résumé Une bibliographie sélective sur l'électrification des chemins de fer a été préparée. Celle-ci est constituée d'extraits de différents manuels, d'articles de journaux, de conférences sur le sujet, etc. Cette bibliographie est le résultat de nombreuses recherches dans les bibliothèques ainsi que dans les centres de références. Son étendue est internationale et inclut les publications parues jusqu'à septembre 1986.			
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INTRODUCTION

This bibliography was prepared by Canadian Pacific Consulting Services Limited for the Transportation Development Centre library in response to a request to collect information in the form of citations of books, articles, conference papers, etc. This was accomplished by computer searches, manual searches and our own files.

Computer data bases that were searched were TRIS, supplied by the U.S. Transportation Research Board and INSPEC, supplied by the Information Division of the I.E.E.E.

Manual searches were made of British Railway Research publications, "Monthly Review of Technical Literature"; International Union of Railways, International Railway Documentation and Railway Research and Engineering News. Documentation of the Canadian Pacific Corporate Library and Canadian Pacific Consulting Services' reference centre was also reviewed.

Listings are not exhaustive owing to time constraints of the project.

Citations are listed numerically. Subjects are listed alphabetically.

The author index is in alphabetical order with the citations listed by number. Where items have joint authorship the citation is listed for up to three authors.

INTRODUCTION

Le Service d'études du Canadien Pacifique a préparé la présente bibliographie pour la bibliothèque du Centre de développement du transport, suite à une demande de recueil de renseignements, sous la forme de citations, de livres, d'articles, de sujets de conférence, etc., ce qui fut réalisé par des recherches automatisées et manuelles et aussi par une consultation de nos propres dossiers.

Les bases de données qui ont été consultées sont les bases TRIS et INSPEC mises à notre disposition respectivement par "U.S. Transportation Research Board" et le Service des renseignements de I.E.E.E.

Ont été consultés manuellement, le "Monthly Review of Technical Literature" des publications "British Railway Research", "International Union of Railways", "International Railway Department" et "Railway Research and Engineering News". La documentation de la bibliothèque de "Canadian Pacific Corporation", et le centre de consultation du Service d'études du Canadien Pacifique ont aussi été mis à contribution.

Les listes ne sont pas complètes à cause du peu de temps alloué au projet.

Les citations sont par ordre numérique et les sujets par ordre alphabétique.

L'index des auteurs est par ordre alphabétique et les citations par numéro. Lorsque la paternité est conjointe, la citation ne mentionne que trois auteurs.

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ÉLECTRIFICATION

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10776	10801	10806	10813
10865	10872	10891	10901
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11142	11189	11191	11192
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10310	10315	10316	10341
10376	10475	10496	10499
10512	10513	10514	10515
10517	10519	10537	10540
10550	10552	10574	10576
10579	10726	10762	10774
10793	11007	11011	11035
11123	11131	11169	11171
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11343	11349	11362	11364
11375	11376	11389	11392
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11098	11133	11351	11512

Spain:

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11108	11230	11363	11434
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Sweden:

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10806	10932	10985	11241

Switzerland:

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10412	10489	10513	10535
10546	10567	10570	10669
10694	10726	10730	10781
10889	11026	11106	11271
11315	11319	11354	

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Taiwan:

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10766	10769	10770	10796
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10616	10617	10618	10619
10625	10651	10658	10688
10695	10721	10728	10784
10797	10987	11017	11052
11067	11068	11074	11093
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Yugoslavie:

10860 11388

Zaire:
Zaire:

11027

Zimbabwe:
Zimbabwe:

10200 10201 10202 10203
10545 11412

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PARASITES ÉLECTROMAGNÉTIQUES

General:
Général:

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10321	10322	10350	10351
10352	10357	10373	10428
10433	10453	10454	10455
10456	10457	10458	10504
10525	10533	10598	10601
10610	10664	10701	10740
10786	10787	10821	10827
10831	10834	10844	10845
10864	10900	10914	10928
10942	10951	10976	10984
10997	10998	11006	11016
11030	11082	11088	11111
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10426	10433	10436	10437
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10467	10530	10612	10667
10668	10697	10715	10740
10741	10744	10761	10785
10827	10831	10844	10845
10862	10888	10944	10966
10975	10995	11016	11040
11082	11085	11088	11116
11140	11224	11261	11305
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 10080 10357 10533 10673
 10685 10729 10748 10749
 10756 10854 11023 11207
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LOCOMOTIVES
LOCOMOTIVES

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Général:

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 10149 10179 10182 10187
 10189 10193 10202 10239
 10240 10243 10246 10261
 10287 10290 10321 10330
 10345 10347 10348 10365
 10370 10392 10396 10432
 10433 10478 10489 10507
 10518 10527 10535 10539
 10543 10560 10562 10563
 10567 10577 10578 10587
 10588 10596 10635 10648
 10674 10680 10687 10688
 10692 10696 10700 10717
 10743 10757 10762 10788
 10798 10814 10852 10874
 10895 10898 10903 10917
 10921 10924 10927 10936
 10971 10974 11017 11028
 11044 11048 11091 11117
 11130 11146 11167 11170
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 11228 11244 11290 11292
 11296 11314 11330 11336
 11376 11384 11455 11460
 11465 11466 11472 11488
 11560 11572 11597 11600
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Adhésion:

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 10839 10857 10981 10991
 11180 11194 11426

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Développement:

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 10955 11317 11580

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15 kV: CA:

10327 10433 10546 10983

25 kV: AC:
25 kV: CA:

10092 10260 10324 10402
 10545 11357 11412 11498
 11587

50 kV: AC:
50 kV: CA:

10056 10279 10282 10354
 10384 10936 11003

High Speed:
Haute vitesse:

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Maintenance:

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10902	10940	10982	10983
10992	11021	11057	11064
11089	11102	11118	11166
11233	11234	11235	11238
11265	11266	11287	11292
11336	11393	11499	11508
11547	11587		

Thyristor Controlled:

Commande par Thyristor:

10036	10092	10095	10146
10212	10331	10527	10790
10791	10794	10893	10932
10948	11002	11027	11129
11181	11321	11354	11460
11520	11575	11576	10763

Chopper Controlled:

Commande par Hacheur:

10518	10544	11018	11086
11091	11108	11520	

EMUs:

EMUs:

10070	10091	10104	10307
10346	10489	10803	10925
10953	11444	11563	11576
11583	11585	11586	

Motors:

Moteurs:

10090	10121	10147	10172
10190	10193	10235	10363
10399	10493	10509	10523
10628	10674	10758	10759
10771	10788	10803	10858
10882	10902	10912	10915
10940	11058	11087	11117
11118	11122	11144	11165
11168	11234	11235	11238
11265	11268	11271	11278
11291	11322	11333	11343
11471	11484	11489	11498
11508	11510	11530	11545
11547	11562	11584	11587
11591			

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LÉVITATION MAGNÉTIQUE

10033	10066	10169	10230
10269	10274	10280	10300
10332	10334	10335	10340
10342	10343	10497	10510
10511	10521	10643	10869
10870	10879	10880	10886
10891	10897	10899	10910
10916	10920	10946	10947
11074	11075	11083	11087
11112	11158	11174	11212
11213	11216	11239	11240
11253	11255	11284	11471
11493	11500	11501	11521
11526	11529	11531	11534
11535	11536	11537	11538
11551	11564	11565	11566
11567	11568	11569	11579
11628			

OVERHEAD CONTACT SYSTEM

SYSTÈME CATÉNAIRE

General:

Général:

10005	10011	10031	10035
10078	10079	10082	10093
10096	10127	10139	10164
10186	10196	10223	10226
10231	10248	10253	10259

OVERHEAD CONTACT SYSTEM (cont'd)
SYSTÈME CATÉNAIRE (suite)

General: (cont'd)
Général: (suite)

10266	10268	10319	10323
10325	10355	10359	10381
10405	10406	10407	10408
10448	10451	10452	10459
10470	10471	10472	10473
10487	10488	10491	10512
10528	10556	10585	10607
10608	10619	10639	10651
10653	10654	10655	10656
10657	10673	10698	10699
10715	10734	10735	10763
10765	10806	10846	10847
10848	10849	10876	10878
10881	10913	10914	10934
10935	10941	10965	10967
10970	10973	11001	11007
11009	11033	11034	11049
11050	11063	11067	11095
11099	11114	11132	11147
11160	11161	11210	11215
11237	11247	11252	11299
11309	11356	11361	11373
11395	11429	11430	11432
11457	11490	11496	11514
11548	11554	11607	11608
11609			

Installation:
Installation:

10355	10589	10608	10683
10686	10694	10712	10722
10823	10956	10965	11038
11092	11191	11310	11312
11362	11366	11395	11397
11408	11417	11419	11432
11442	11446	11458	11461
11462	11463	11477	11483
11487	11492	11599	11623

Current Collection:
Collecte de courant:

10137	10245	10258	10271
10284	10362	10375	10401
10427	10431	10434	10435
10438	10439	10440	10441
10452	10460	10462	10469

Current Collection: (cont'd)
Collecte decourant: (suite)

10470	10471	10584	10626
10630	10638	10646	10655
10678	10693	10702	10719
10755	10832	10836	10838
10840	10841	10842	10843
10871	10876	10877	10881
10885	10887	11157	11178
11033	11053	11054	11093
11136	11182	11243	11275
11282	11360	11157	11178
11182	11196	11429	11435
11540			

Development:
Développement:

10054	10059	10138	10143
10223	10238	10246	10305
10313	10380	10395	10401
10418	10419	10420	10421
10422	10492	10558	10589
10592	10617	10641	10682
10710	10714	10720	10727
10730	10736	10745	10750
10752	10819	10873	10877
10881	10968	11059	11113
11155	11262	11269	11273
11302	11312	11338	11347
11358	11363	11366	11372
11391	11410	11424	11457
11492	11543	11593	11604

Electrical Characteristics:
Caractéristiques électriques:

10112	10126	10128	10291
10449	10561	10583	10690
10828	10835	11387	11532

Insulation:
Isolation:

10266	10451	10652	10677
10683	10727	11154	11250
11391	11458	11477	11514
11592			

Safety:
Sécurité:

10611	11252	11254	11353
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OVERHEAD CONTACT SYSTEM (cont'd)
SYSTÈME CATÉNAIRE (suite)

Operation and Maintenance:
Opération & Maintenance:

10014	10096	10159	10289
10370	10372	10561	10601
10604	10608	10609	10618
10660	10663	10675	10681
10823	11008	11070	11090
11150	11252	11257	11276
11301	11332	11345	11352
11359	11367	11368	11394
11398	11402	11405	11407
11408	11419	11430	11447
11487	11505		

Third Rail:
3^e Rail:

10134	10175	10248	10258
10314	10374	10377	10379
10732	10811	10856	11104
11215	11221	11272	

Wear/Damage:
Usure/dommages:

10034	10096	10410	10411
10412	10413	10414	10415
10592	10892	10938	10973
11276	11294	11306	11335
11337	11360	11394	11417
11435	11514		

Wind/Ice Loading:
Charge de vent/glace:

10382	10459	10463	10464
10465	10466	10633	10645
10725	10764	10981	11100
11222	11247		

PANTOGRAPH
PANTOGRAPH:

General:
Général:

10116	10171	10253	10305
10385	10448	10673	10693
10833	10836	10871	10875

General: (cont'd)
Général: (suite)

10876	10881	10894	10941
10973	11001	11033	11050
11248	11275	11277	11306
11307	11360	11374	11452
11491	11540		

Behaviour:
Comportement:

10103	10134	10229	10253
10258	10362	10385	10405
10406	10407	10408	10452
10459	10460	10461	10462
10463	10469	10470	10471
10472	10473	10654	10877
10911	10973	10990	11034
11052	11196	11360	11374
11413	11540		

Development:
Développement:

10135	10136	10171	10597
10638	10653	10656	10657
10678	10784	10819	10894
11001	11096	11188	11277
11408			

Wear:
Usure:

10410	10411	10412	10413
10414	10415	10448	10592
11034	11050	11306	11417
11435			

POWER
ÉNERGIE

General:
Général:

10006	10009	10039	10047
10052	10062	10067	10072
10097	10098	10127	10160
10161	10173	10221	10288
10360	10394	10468	10476
10517	10547	10553	10555
10564	10581	10582	10585
10586	10588	10594	10596

POWER (cont'd)
ÉNERGIE (suite)

General: (cont'd)
Général: (suite)

10599	10602	10605	10613
10614	10615	10616	10623
10632	10634	10637	10679
10723	10729	10733	10747
10749	10769	10797	10822
10826	10861	10867	10883
10884	10931	10952	10963
10980	11010	11059	11060
11067	11079	11124	11156
11217	11219	11226	11245
11247	11258	11270	11279
11281	11283	11289	11293
11323	11386	11392	11396
11406	11445	11485	11486
11502	11504	11506	11527
11541	11605		

Conversion:
Conversion:

10015	10030	10077	10088
10150	10175	10199	10205
10206	10250	10262	10272
10298	10308	10336	10363
10393	10481	10495	10527
10551	10565	10568	10571
10581	10606	10762	10782
10789	10915	10922	10924
10957	10977	10982	10993
11057	11115	11146	11151
11189	11194	11198	11233
11236	11279	11286	11287
11288	11317	11319	11321
11329	11466	11469	11470
11475	11507	11511	11576

Current Distribution:
Distribution de courant:

10234	10474	10835	11299
11373			

Fault Locating:
Localisation des défauts:

10162	10863	10986
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Loads/Load Factor:
Charges/facteur de charge:

10644	10711	10724	11114
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Losses:
Pertes:

10068	10197	10290	10703
11424			

Re-Active Power Compensation:
Compensateur de puissance réactive:

10503	10548	10705	10828
11211	11259	11329	11494

Reliability:
Fiabilité:

10649	10681	11067	11161
11299	11325	11545	

Transformers/Switchgear:
Transformateur/appareil de coupure:

10002	10118	10207	10249
10580	10642	10977	11224
11476			

Transmission Lines:
Lignes de transmission:

10011	10063	10064	10069
10134	10175	10206	10225
10248	10258	10312	10372
10373	10734	10811	10848
10856	11069	11104	11164
11215	11221	11272	11293
11381	11503	11504	11506
11523			

Wayside Storage:
Récupération d'énergie:

10477	10508	11598	11627
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Auxiliary:
Auxiliaire:

10214	11220
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PROTECTION
PROTECTION

General:

Général:

10011	10267	10440	10444
10488	10595	10598	10600
10601	10602	10661	10670
10738	10853	10994	11036
11201	11300	11355	11403
11418	11525		

Circuit Breakers/Vacuum Switches:
Disjoncteur/Commutateur à vide:

10061	10642	11032	11073
11263	11497	11582	

Earthing:

Mise à la terre:

10532	10670	10684	10686
11478			

Short Circuit:

Court circuit:

10161	10236	10264	10600
10738	10825	10863	11299

Surge:

Surtension:

10123	10176	10286	10338
10416	10417	10418	10419
10420	10421	10422	10442
10443	10444	10445	10446
10918	11438		

SAFETY
SÉCURITÉ

10084	10200	10207	10217
10222	10556	10609	10611
10620	10629	10659	10756
11252	11254	11353	11418

SIGNALS & COMMUNICATION
SIGNALISATION ET COMMUNICATION

10011	10125	10140	10177
10256	10263	10273	10285
10368	10398	10409	10530
10593	10603	10622	10753
10783	10815	10900	10906
10995	11037	11256	11311
11425	11454	11474	11490
11550	11629		

SIMULATIONS/MODELS
SIMULATIONS - MODÈLES

10041	10090	10099	10156
10160	10174	10195	10197
10220	10241	10271	10286
10340	10364	10427	10432
10438	10483	10492	10644
10745	10750	10949	11019
11039	11079	11110	11176
11273	11334	11415	11482
11540	11578	11597	11625

SUBSTATIONS
SOUS-STATIONS

General:

Général:

10032	10067	10101	10126
10128	10141	10204	10207
10242	10252	10255	10265
10288	10476	10479	10530
10531	10576	10580	10583
10591	10594	10596	10601
10602	10616	10647	10673
10788	10868	11007	11059
11063	11069	11143	11149
11281	11283	11286	11318
11325	11341	11392	11406
11467			

Alternating Current:

Courant alternatif:

10220	10224	10226	10404
10499	10502	10564	10586
10615	10704	10800	11020
11024	11084	11283	11370
11594			

SUBSTATIONS (cont'd)
SOUS-STATIONS (suite)

Direct Current:
Courant direct:

10108	10226	10251	10498
10502	10503	10586	11014
11072	11189	11264	11286
11528			

Design:
Conception:

10063	11109	11268	11297
11362			

Dispatching/Control:
Répartition/contrôle:

10074	10117	10165	10198
10242	10247	10547	10599
10605	10930	10931	10943
10954	11031	11197	11245
11256	11316	11332	11368
11382	11505	11512	

STRUCTURES, BRIDGES AND TUNNELS
STRUCTURES, PONTS ET TUNNELS

10217	10237	10378	10450
10558	10639	10694	10735
10793	10950	11132	11145
11310	11352	11397	11421
11446	11458	11461	11463
11477	11483	11599	11604

TESTING/TRIALS
VÉRIFICATION/ESSAIS

10014	10055	10093	10094
10095	10116	10153	10196
10243	10321	10418	10419
10423	10424	10429	10434
10443	10445	10448	10450
10455	10459	10463	10466
10469	10470	10471	10472
10473	10485	10522	10635
10626	10654	10667	10708
10739	10873	10986	11053
11102	11105	11120	11275
11356	11408	11409	11410
11489	11496	11553	11571
11578	11593		

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Explication du système qui exige la transmission ininterrompue de signaux codés, des véhicules mobiles au fil d'antenne.

10012

Allan, R. "Power semiconductors." IEEE Spectrum. Vol. 12 no. 11 (November 1975):37-45.

10013

Jacenko, D. "Report on the visit to the USSR by the U.S. electrification delegation." Washington, D.C. Federal Railroad Administration. (1975):1-127.

10014

"A synthetic inspection train for electric and track facilities of the Shinkansen." Japanese Railway Engineering. Vol. 15 no. 3/4:23-24.

Describes the seven-car train used to inspect fixed facilities.

Description du train à sept voitures servant à l'inspection des installations fixes.

10015

Terachi, K. and M. Takeishi. "Shinkansen electric power facilities between Shin-Osaka and Hakata." Japanese Railway Engineering. Vol. 15 no. 3/4:20-22.

Describes the catenary system, feeders, power transforming facilities and overhead contact facilities.

Description du système caténaire, des lignes d'alimentation, des installations de transformation d'énergie et de la ligne de contact.

10016

Atkinson, I. "Supertram network to speed Tyneside travellers." IPC Building and Contract Journal. Vol. 265 no. 4996 (June 1975): 28-29.

Discusses the overhead electrified rapid transit system.

Discussion du système de transport rapide électrifié par caténaire.

10017

"Auckland rapid transit scheme." New Zealand Engineering. Vol. 30 no. 4 (April 1975):99-102.

Outlines the rail component including electrification, the route, details of the overhead power system and environmental features.

Exposé général des composantes de chemin de fer y compris l'électrification, le trajet, des détails sur le système caténaire d'énergie et les caractéristiques de l'environnement.

10018

De S Deva-Aditya, N.J. and C. Hill. "Dealing with technology's more noisy advances." Municipal Engineering. Vol. 152 no. 11 (March 1975):523-524.

Describes increasing noise problems associated with technology and noise measuring techniques.

Description des problèmes croissants du bruit inhérents à la technologie et des méthodes utilisées pour en mesurer le niveau.

10019

Ephraim, M. "Electric locomotives for the 1980s." Washington, D.C. Transportation Research Board. 1983. Record no. 939:51-59.

A report on electric locomotive developments in the United States.

Compte-rendu de l'évolution des locomotives électriques aux États-Unis.

10020

Reistrup, P.H. "Financing railway electrification." Washington, D.C. Transportation Research Board. 1983. Record no. 939:49-50.

Addresses specific challenges and possible solutions to the funding obstacle of electrification.

Ce document souligne les défis particuliers et leurs solutions possibles que soulève le financement de l'électrification.

10021

Weiss, W.D., H.I. Hayes and P.L. Shaw. "Comparative catenary costs-European and U.S. main line railroad electrification." Washington, D.C. Transportation Research Board. 1983. Record no. 939:44-48.

Costs of overhead contact systems (catenaries) for overseas electrification much lower than those of U.S. installations.

Les coûts de l'électrification des chemins de fer montrent que le prix de revient des systèmes caténares d'outre-mer est beaucoup moins élevé que celui des systèmes des États-Unis.

10022

Spenny, C.H. and G.B. Mott. "Cost/benefit evaluation of electrification of a U.S. Rail Network." Washington, D.C. Transportation Research Board. 1983. Record no. 939:35-44.

Analyzes the economics of an electrified U.S. freight-hauling network, consisting of 96 route segments for 16 railroads and totalling nearly 29,000 route-miles.

Analyse de l'économie aux États-Unis, d'un réseau de train de marchandises électrifié comprenant 96 segments de route utilisés par 16 chemins de fer, et dont la longueur totale atteint presque 29,000 milles de route.

10023

Tennyson, E.L. "Economic synergism in railroad electrification." Washington, D.C. Transportation Research Board. 1984. Record no. 953:47-51.

The possible reasons for North America's failure to develop railroad electrification, the advantages and disadvantages of electrification, and means for obtaining the benefits of electrification in North America are addressed.

Ce document expose les raisons probables de l'échec du développement de l'électrification des chemins de fer en Amérique du Nord, les avantages et les désavantages de l'électrification et les moyens d'en tirer avantage en Amérique du Nord.

10024

Taflove, A. "Mutual design of overhead transmission lines and railroad communications and signal systems." Washington, D.C. Transportation Research Board. 1984. Record no. 953:42-27.

Interference to railroad communications and signal systems from high-voltage, overhead, alternating current (ac) power lines is examined.

Examen des perturbations aux communications ferroviaires et aux systèmes de signalisation par les hautes tensions, la caténaire et les lignes d'énergie à courant alternatif (c.a.).

10025

Edelson, C., L.E. Long and F.R. Holmstrom. "AC propulsion-good medicine, but what are the side effects?" Washington, D.C. Transportation Research Board. 1984. Record no. 953:39-41.

Introduces some unexpected negative side effects caused by the introduction of a new emitter of electromagnetic interference into the transit environment.

Effets secondaires négatifs imprévus, causés par l'apparition d'une nouvelle source d'interférence électromagnétique dans l'environnement du système de transit.

10026

Cooper, H.B.H., and C.A. Webb. "Energy considerations for railroad electrification in the United States." Washington, D.C. Transportation Research Board. 1981. Record no. 802:41-49.

Energy and environmental impacts plus an economic analysis that relate to both costs and benefits of railroad electrification.

Considérations sur l'énergie et les conséquences sur l'environnement ainsi qu'une analyse économique coûts/avantages de l'électrification des chemins de fer.

10027

Whitford, R.K. "Railroad electrification: an alternative for petroleum savings." Washington, D.C. Transportation Research Board. 1981. Record no. 802:33-41.

Evaluation of various scenarios of construction rates, freight growth, and fuel-price escalation shows that electrification of the nation's high-density railroad routes is a cost-effective alternative when compared with the cost and output of synthetic-fuel plants.

L'évaluation de divers scénarios des taux de construction, la croissance du fret et la montée en flèche des prix du pétrole montrent que l'électrification des trajets de chemin de fer achalandés de la nation est une solution économique efficace, si on la compare au coût et au rendement du combustible synthétique.

10028

Quail, J.B. "Economics of electric traction to transport coal on Richards Bay Line." Washington, D.C. Transportation Research Board. 1982. Record no. 802:30-33.

South African Railways new electrified line between coal fields in the Eastern Transvaal and Richards Bay Harbour using a 25 kV 50 Hz system.

La nouvelle ligne électrifiée des chemins de fer sud-africains terminaient une nouvelle ligne électrifiée reliant les bassins houillers du Transvaal oriental au port de Richards Bay est alimentée à 25 kV 50 Hz.

10029

Laithwaite, E.R. and S.B. Kuznetsov. "Development of an induction machine commutated thyristor inverter for traction drives." IEEE Transactions on Industry Applications. (January 1981):28-33.

Discusses variable-speed thyristor inverter system using a cage-rotor induction motor for natural commutation.

Ce document traite d'un système d'onduleur à thyristor et à vitesse variable utilisant un moteur à induction avec rotor en cage pour une commutation propre.

10030

Skudelny, H.C. "Modern directions of research on drive systems for electric rail and road vehicles." South African Institute of Electrical Engineers Transactions. Vol. 71 (October 1980):280-285.

Semi-conductor power converters make possible the operation and control of advanced high-power, high-speed motors.

Les onduleurs de puissance à semi-conducteurs rendent possibles le fonctionnement et la commande des moteurs haute vitesse, haute puissance, perfectionnés.

10031

Mahrt, R. "Influence of Y-ropes on the static flexibilities of catenaries." AEG Telefunken Progress. Vol. 53 no. 3 (1980):81-88. (In German).

An analysis of catenary chains horizontal motion of rope elements.

Dans l'analyse des chaînes caténaïres, on étudie le déplacement horizontal des éléments de corde.

10032

Meyer, A.S. "Manufacture of electric traction equipment in South Africa." South African Institute of Electrical Engineers Transactions. Vol. 71 (October 1980):286-290.

The development of manufacturing facilities and equipment for trackside substations.

Évolution des installations et du matériel de fabrication des sous-stations installées le long de la voie.

10033

Mahtani, J.L., J.H. Rakels and R.G. Rhodes. "Split-track system of electrodynamic levitation for high-speed transport." Proceedings of the International Cryogenic Engineering Conference 8th. (June 1980):659-663.

The split-track maglev system being investigated is based specifically on the distortions of eddy currents induced at the inner edges of two aluminum strips constituting the guideway.

Le système maglev à voie divisée examiné est basé spécifiquement sur les distorsions des courants de Foucault induits sur les bords intérieurs des deux lamelles constituant le guide de voie.

10034

Shimogo, T., K. Yoshida and T. Kakii. "Dynamic evolution mechanism of wavy wear of trolley wire at high-speed railway." Proceedings of the International Conference of the American Society of Mechanical Engineers. 1981. San Francisco, California:351-357.

Results of research on wavy wear on the New Tokaido Line in Japan are presented in this paper.

Résultats des recherches sur l'usure ondulatoire de la ligne New Tokaido au Japon.

10035

"TGV: an RG analysis." Railway Gazette International. Vol. 137 no. 9 (September 1981):715-740.

Analyses 25 years of trials and research by SNCF.

Analyse de 25 années d'essais et de recherches effectués par la SNCF.

10036

Weber, H.H. "Swiss federal charts traction policy for the decade." Railway Gazette International. Vol. 137 no. 8 (August 1981):655-659.

Analyses the immediate future for main-line motive power in connection with thyristor-controlled locomotives.

Analyse de l'avenir immédiat du matériel de traction des grandes lignes relativement aux locomotives commandées par thyristor.

10037

Jessen, K. "Colorado's unremarked testimonial to railroading." Trains. Vol. 41 no. 11 (September 1981):44-47.

Studies of the Amax Henderson molybdenum mine in Colorado which includes an electrified double-track narrow gauge railroad operating through a 9.6 mile tunnel.

Études sur la mine de molybdène Amax Henderson au Colorado où on utilise un chemin de fer pour voie étroite à double voie électrifiée dans un tunnel de 9.6 milles.

10038

Krasnobajev, N.I., et al. "Traction batteries almost competitive as an adjunct to electrification." Railway Gazette International. Vol. 137 no. 6 (June 1981):487-490.

Soviet Railways' experience with dual-mode EMUs and locomotives.

Expérience des chemins de fer soviétiques avec les locomotives et les unités électromagnétiques à mode double.

10039

Khan, A.M. "Energy efficiency of electrified passenger railway in the Canadian context." Journal of Advanced Transportation. Vol. 14 no. 3 (1980):237-254.

Examination of the energy implications of passenger railroad electrification in terms of propulsion energy requirements.

Études sur l'utilisation de l'énergie pour l'électrification des trains de passagers en fonction des besoins de la population.

10040

Adam, C.P. and J.L. Nutter. "Power supplies for railway electrification and general use in a remote area." Institution of Engineers, Australia Electrical Engineering Transactions. Vol. EE16 no. 4 (December 1980): 176-183. (First Published at the Electric Energy Conference. (1979). Brisbane, Australia:93-101).

The Pilbara area of Western Australia has four railways which are discussed in relation to their potential for conversion from diesel to electric traction.

Les quatre chemins de fer du secteur Pilbara de l'Ouest de l'Australie sont étudiés en vue d'une conversion possible de la traction diesel à la traction électrique.

10041

Littler, G.E. "Performance of an ac electrified railway system at harmonic frequencies." Institution of Engineers, Australia Electrical Engineering Transactions. Vol. EE16 no. 4 (December 1980):184-189.

A digital computer network analysis program to determine railway system harmonic voltage and current distribution to study resonance conditions, current amplification, distortion and equivalent disturbing current.

Programme d'analyse de réseau par ordinateur numérique pour déterminer les tensions harmoniques et la distribution de courant d'un réseau de chemin de fer dans le but d'étudier les conditions de résonance, l'amplification du courant, la distorsion et le courant de perturbation équivalent.

10042

Jenkins, P.E., G.D. Anthon and A.D.C. Blakeley-Smith. "Railway electrification system selection and initial design." Institution of Engineers, Australia Electrical Engineering Transactions. Vol. EE16 no. 4 (December 1980): 158-166.

Outline of the development of railway electrification and system options currently available.

Grandes lignes du développement de l'électrification des chemins de fer, et des choix de système présentement utilisables.

10043

Cook, L.M. and L.J. Lawson. "Dual-Mode locomotive systems engineering." Volume 1, "Summary." Volume 2, "Detailed Description and Analysis." Torrance, California: AiResearch Manufacturing Company; Washington, D.C.: Federal Railroad Administration Office of Research and Development February 1981.

Analysis of the dual mode locomotive (DML) systems engineering study.

Analyse de l'étude technique des systèmes de locomotives à double mode (DML).

10044

O'Neill, D.J. "Railroad electromagnetic compatibility: locomotive volume 3. Summary of AEM-7 electromagnetic emission measurements." Annapolis, Maryland: Electromagnetic compatibility analysis center. Washington, D.C.: Federal Railroad Administration. Office of Research and Development (February 1981). Report no. FRA/ORD-80/66.3.

Presents results of electromagnetic emission measurements of an AEM-7 are presented.

Résultats des mesures d'émission électromagnétique effectuées sur un AEM-7.

10045

Elliott, P. "Railroad electromagnetic compatibility (EMC)." Proceedings of a symposium sponsored by the Railroad EMC Working Group - Association of American Railroads, Institute of Electrical and Electronics Engineers, American Railway Engineering Association. Pueblo, Colorado. 1980: Report no. FRA/ORD-80/46.

Five technical sessions on electric traction power distribution systems, locomotive and other propulsion systems, communication and power lines paralleling the right-of-way, signal and control and measurement techniques.

Cinq séances techniques sur les systèmes de distribution d'énergie servant à la traction électrique, les locomotives et d'autres systèmes de propulsion, les lignes d'énergie et de communication parallèles au droit de passage, les techniques de mesure, de commande et de signalisation.

10046

Avery, R.M. "Inductive interference aspects of the decision to electrify." Association of American Railroads Annual meeting. September 1979. Chicago, Illinois:148-179.

Addresses the problem of inductive interference under the headings: electrostatic and electromagnetic induction; voltage limitations and industry guidelines; power supply systems; shielding; protection devices; application of inductive coordination.

Ce document traite du problème de l'interférence inductive sous les en-têtes suivants: induction électromagnétique et électrostatique; limitations de la tension et normes industrielles; systèmes d'alimentation; blindage; dispositifs de protection; application de la coordination inductive.

10047

Walter, C.E. and J.D. Salisbury. "Inductive energy transfer in transportation." UMTA R. and D. Conference. November 1980. Norfolk, Virginia:1-31.

Reviews the DOE program for studying the use of inductive energy transfer in transportation systems.

Revue du programme DOE pour l'étude du transfert de l'énergie inductive dans les systèmes de transport.

10048

"Railroad electrification annual status report." Washington, D.C. Federal Railroad Administration 1981.

Identifies and briefly describes activities being conducted by the government, railroads, suppliers, architect/engineering firms and the utility industry in railroad electrification.

Ce rapport établit et décrit brièvement les activités du gouvernement, des chemins de fer, des fournisseurs, des bureaux d'ingénieur et d'architecte et de l'industrie, des services publics dans l'électrification des chemins de fer.

10049

Manabe, K. and T. Morikawa. "High frequency vibrational characteristics of overhead contact wires." Railway Technical Research Institute Quarterly Report. Vol. 22 no. 1 (March 1981): 40-41.

In investigating the acoustic noise from the Shinkansen current collection system, the vertical vibrations of contact wire under impulsive forces were measured to determine its vibrational characteristics.

En étudiant le bruit acoustique du système de collection de courant du Shinkansen, on a mesuré les vibrations verticales du fil de contact sous les forces impulsives pour déterminer ses caractéristiques de vibration.

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Arai, K. "Balancing method for three-phase power system supplying single-phase load by means of scalene Scott-connected transformer assembly." Railway Technical Research Institute Quarterly Report. Vol. 22 no. 1 (March 1981):10.

10051

Fouvy, C.L. "Energy Savings with Melbourne's new electric trams." Australian Institute of Energy, National Conference. (1980). Melbourne, Australia:137-148.

The use of a solid state control system ("chopper" control) for regulating motor current during acceleration along with regenerative braking is discussed.

Utilisation d'un système de commande à circuit hacheur pour régler le courant des moteurs pendant l'accélération ainsi que le freinage rétroactif.

10052

Newman, P. and J. Kenworthy. "Public and private transport in Australian cities: An analysis of existing patterns and their energy implications." Transport Policy and Decision Making. Vol. 1 no. 2-3. (1980):133-149.

Analyses energy consumption by type of fuel for comparison of modal energy efficiencies and per capita transport energy consumption.

Ce document analyse la consommation d'énergie par type de carburant pour comparer l'efficacité de l'énergie modale et la consommation d'énergie du transport par personne.

10053

Rossberg, R.R. "Operation of electric railroads of the East German railroad system." Elektrische Bahnen. Vol. 78 no. 11 (November 1980):337-342 and Vol. 78 no. 12. (December 1980):301-308. (In German).

10054

Kocher, M. and B. Furrer. "New overhead contact system of the railroad line Bern-Loetschberg-Simplon (BLS) in Switzerland." Elektrische Bahnen. Vol. 78 no. 11 (November 1980):288-295. (In German).

Addresses the overhead line, increased demands due to higher traction performance, difficult conditions in tunnels and the technical stage of development of modern overhead systems.

Le choix de la caténaire, les exigences accrues dues à une meilleure traction, les situations difficiles rencontrées dans les tunnels et le côté technique des systèmes caténaires modernes font l'objet de rapport.

10055

Cracker, W.F. Jr. and W.H. Siemens. "Electromagnetic compatibility test facility for signal and communication systems." Association of American Railroads Communication and Signal Division Annual Meeting. 1980. Washington, D.C.:271-277.

The EMC test facility at Pueblo, Colorado has become more important as the usage and sophistication of electrical and electronic equipment has increased, now involving higher speed circuitry, broader bandwidths and greater utilization of all available frequencies.

Les installations d'essais EMC à Pueblo au Colorado ont pris plus d'importance avec l'augmentation de l'utilisation et la complexité du matériel électronique et électrique qui comprend maintenant des circuits à plus haute vitesse, des largeurs de bande plus étendues et une utilisation plus intense de toutes les fréquences disponibles.

10056

Souch, D.J.W. and J. Dowling. "50 kV locomotives for a mineral railway." Institution of Mechanical Engineers Proceedings. Vol. 195 no. 17 (1981):190-202.

Description of the 3780 kW Co-Co locomotives used to haul trains of 20,000 tonne.

Description des locomotives Co-Co de 3780 kW utilisées pour remorquer des trains de 20,000 tonnes.

10057

Koerner, E. "The problem of stability in motion equations of the propulsion system of an electric locomotive." Eisenbahntechnik. No. 3 (1980):19-25. (In German).

Analysis of the movement equations that are established from the propulsion system of an electric locomotive.

Analyse des équations de mouvement établies d'après le système de propulsion d'une locomotive électrique.

10058

"Thyristor Traction." Association Suisse des Electriciens seminar. October 1980. Lucerne, Switzerland:185. (In German and French).

A review of technical advances on the CFF, the DB and the SNCF.

Revue des progrès techniques réalisés sur le CFF, le DB et le SNCF.

10059

Bakalov, Z. "A new type of polymer for fixing catenary suspension gear in limited gauge railway tunnels." Zelezopaten Transport. Vol. 56 no. 2 (1981):39-43. (In Bulgarian).

Describes new teflon-based technology for the production of insulating parts of catenary suspension in tunnels.

Nouvelle technique à base de teflon d'utilisation des pièces isolantes destinées au dispositif de suspension caténaire dans les tunnels.

10060

Eibenstein, A. "Urban rapid transit systems Rhine-Ruhr-Wupper Rivers; putting into operation the rapid transit route segment Duesseldorf main depot-Solinghen-Ohlings, West Germany." Elektrische Bahnen. Vol. 78 no. 10 (October 1980):285-286. (In German).

Connecting the Duesseldorf main station with its airport.

Raccordement de la station principale de Duesseldorf avec l'aéroport.

10061

Nissen, U. "Vacuum switches in the switching station Hude, West Germany." Elektrische Bahnen. Vol. 78 no. 10 (October 1980):283-285. (In German).

Analyses vacuum switches developed for the West German Railroad System.

Analyse des interrupteurs à vide mis au point pour le réseau ferroviaire de l'Allemagne de l'Ouest.

10062

Taylor, K. "Power engineering in rail transport." Electronics and Power. Vol. 28 no. 1 (January 1982):28-33.

10063

Schaefer, H.H. "Electrification of the railroad line Salzbergen-Emden-Norddeich (Mole) in West Germany." Elektrische Bahnen. Vol. 78 no. 10 (October 1980):265. (In German).

Substations design and railroad transmission lines are described.

Description du design des sous-stations et des lignes de transmission du chemin de fer.

10064

Bauer, K.H. and F. Kiessling. "Installation of a railroad transmission line on the overhead line support." Elektrische Bahnen. Vol. 78 no. 10 (October 1980):257-260. (In German).

The Rheine-Salzbergen-Emden-Norddeich in West Germany is discussed.

La ligne de chemin de fer électrifiée Rheine-Salzbergen-Emden-Norddeich de l'Allemagne de l'Ouest, fait l'objet de ce document.

10065

Tierney, J.R. and R.J. Turner. "Improvement to the booster transformer/return conductor method of suppressing 50 Hz interference from AC electrified railway systems." Institution of Electrical Engineers Procedures. Part B, Vol. 128 no. 1 (January 1981):61-66.

10066

Glatzel, K., D. Rogg and H. Schulz. "Research and development program "magnetically suspended transport systems" in the Federal Republic of Germany." The International Conference of the Cybernetics Society. (October 1980). Cambridge, Massachusetts:763-774.

Various modes of magnetic suspension and linear motor propulsion are described.

Différents modes de suspension magnétique et de propulsion par moteur linéaire.

10067

Prickett, B.R. "Electrification of the Tyne and Wear metro."
Institution of Electrical Engineers Procedures. Part B Vol. 128
no. 2 (March 1981):11.

Examines the power supply, overhead equipment and the general technical considerations governing the design of the power system and equipment.

Étude de l'alimentation, de la caténaire et considérations techniques générales déterminant le design du système d'énergie et du matériel.

10068

Van Heijst, T.C.M. and D. Hamels. "Method for the exact calculation of the energy losses in a dc traction network." Elektrische Bahnen. Vol. 78 no. 7 (July 1980):170-179. (In German).

10069

"Biggest electrified network gives the best return." Railway Gazette International. Vol. 137 no. 4 (April 1981):287-291.

This study presents the case of coherent electrified networks designed to minimize the use of diesels under the catenary.

L'étude explique le cas de réseaux électrifiés cohérents conçus pour minimiser l'utilisation de diesels sous la caténaire.

10070

Wakefield, F.H.G. "Next generation of BR multiple-units reverts to all-steel bodies." Railway Gazette International. Vol. 137 no. 4 (April 1981):284-286.

10071

Koyanagi, S. "Following performance of PS9020 series trial pantographs." Railway Technical Research Institute Quarterly Report. Vol. 21 no. 4 (1980):197-198.

To improve high-speed current collection on the Shinkansen, three types of pantograph other than those with coil-spring-mounted contact strips were tested.

Pour améliorer le captage du courant à haute vitesse sur le Shinkansen, trois types de pantographes, différents de ceux à semelle montés sur ressort à boudin, ont été testés.

10072

Fujie, H. "Voltage fluctuation correcting system for electric railways using thyristor-controlled reactive power compensating apparatus." Railway Technical Research Institute Quarterly Report. Vol. 21 no. 4 (1980):191-192.

10073

Voronovskii, G.P. "Electrification of Transport." Soviet Electrical Engineering. Vol. 50 no. 2 (1979):1-4.

In the U.S.S.R., more than 40,000 km of main-line track has been electrified, 35% of which works on 25 kV ac.

En URSS plus de 40,000 km de grandes lignes sont électrifiées, dont 35% à 25 kV, c.a.

10074

Kasahara, M. "Centralized substation control system for railway." European Conference on Electronics 4th-EUROCON '80. March 1980. Stuttgart, Germany:404-406.

Development of a large scale computerized remote-control system.

Mise au point d'un grand système télécommandé informatisé.

10075

Geza, T., V. Gyorgy and P. Ferenc. "Traction current effect on the parameters of rail circuits." Elektrotechnika. Vol. 72 no. 3 (March 1979):87-98. (In Hungarian).

Investigates the variation of electrical parameters of the insulated track rails with frequency and traction current in the rails.

Recherches sur les variations des paramètres électriques selon la fréquence et l'intensité du courant dans les rails.

10076

Galev, N.P. "Tasks before the builders of electric locomotives at the present stage." Soviet Electrical Engineering. Vol. 50 no. 2 (1979):12-15.

Batch production of the VL84 7,600 kW main-line ac electric locomotive for the Baikal-Amur line is discussed.

Discussion sur la production en série des locomotives électriques de ligne VL84, 7,600 kW c.a. pour la ligne Baikal-Amur.

10077

Bodrukina, S.S. "Determination of parameters of input filters for static converters of dc rolling stock." Soviet Electrical Engineering. Vol. 50 no. 2 (1979):54-60.

Discusses the effect of impulse-controlled dc electrical rolling stock on the traction network.

Discussion sur l'effet du matériel roulant électrique c.c. commandé par impulsion, sur le réseau de traction.

10078

Daniels, A. "What's being done about electrification costs?" Progressive Railroading. Vol. 24 no. 4 (April 1981):56.

Principal components involved in high-voltage AC electrification are examined using the latest technology to reduce the costs of installation.

Étude des principaux composants exigés pour l'électrification c.a. à haute tension à l'aide de la technologie la plus récente pour réduire les coûts d'installation.

10079

O'Loughlin, T.B. "BR Great Northern suburban electrification - track remodeling and associated civil engineering." Rail Electrification International. Vol. 5 no. 5 (August 1975):201-206.

10080

Ogilvie, J. "Electrification for environmentalists: 2." Modern Railways. Vol. 32 no. 324 (September 1975):370-374.

DC electrification and third-rail distribution considerations for extensions of British Railway's operation.

Étude sur l'électrification c.c. et la distribution par rail de contact, pour l'expansion du fonctionnement des chemins de fer britanniques.

10081

Wallach, I. "Observations on energy regeneration in rapid transit systems." Association of Engineers and Architects of Israel Journal. Vol. 34 no. 1 (January 1975):12-18. (In Hebrew).

10082

Pfister, J. "Electrification of the Black Mesa and Lake Powell Railroad." International Electric Vehicle Symposium and Exposition. 1974. Washington, D.C.:1-8.

Describes the computerized 50 kV electrified railroad.

Description du chemin de fer électrifié 50 kV informatisé.

10083

Ruoppolo, G. "The Quadrupling of the Rome-Florence Line." Rail International. No. 7 (July 1975):565-580.

Illustration of the criteria adopted for the infrastructure construction project.

Illustration des critères adoptés pour le projet de construction de l'infrastructure.

10084

Arai, K., et al. "Test of Fire Fighting for Live Line Electric Equipment." Railway Technical Research Institute Quarterly Report. Vol. 16 no. 2 (July 1975):92-93.

Discusses fire fighting with the power system energized.

Discussion de la protection contre les incendies dans les systèmes d'énergie sous tension.

10085

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Discusses the problem of choosing between electric and diesel traction.

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Recherches sur les systèmes d'énergie: distribution, captage, conditionnement.

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Modèle mathématiques et de programme machine servant à la simulation de la dynamique d'un ou de plusieurs pantographes en contact avec le système caténaire qu'ils parcourent.

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Grandes lignes de l'histoire et de l'évolution de la traction électrique en France et revue des recherches en cours effectuées par la SNCF sur les thyristors, les dispositifs antidérapants des roues, l'amortissement des harmoniques, la commande électronique et les liquides de refroidissement.

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Les 1057 km de traction électrique 25 kV-50 Hz les chemins de fer de l'État finlandais (VR) utilisent 100 E.M.U. et 98 locomotives électriques.

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Renaissance of electrified rail lines after 35 years of domination by diesel-electric traction.

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Various electrical traction systems are analysed and the possibility of converting from the 3 kV DC system to the 25 kV, 50 Hz AC system is discussed.

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The choice is reviewed of the 25 kV AC system for the modernisation of the St. Pancras/Moorgate-Bedford Suburban services, together with a reduction of the electrification fixed equipment costs.

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Eisenhuth, J. "Coordination of the insulation demands for alternating current railways with rated voltages more than 10 kV according to TGL 200-0632/01." Eisenbahntechnik. Vol. 30 no. 11 (November 1982):554-558. (In German).

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"Alternating current 50 Hz electric traction on the South African Railways." Elektrische Bahnen. Vol. 80 no. 8 (August 1982): 234-240.

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Sujets traités: matériel de propulsion pour les systèmes de traction lourde à c.a.; locomotive à double mode; propulsion électrique pour les véhicules urbains sur rail; espacement des sous-stations des chemins de fer électriques; contact accidentel avec les structures et la terre; distribution des tensions; chemins de fer électriques de 25 kV monophasés; liquide d'isolement des transformateurs de chemin de fer.

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Batteries sodium-soufre pour compléter l'électrification des grandes lignes.

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Bjerkeheggen, O. and B. Kollberg. "Energy economics through solid-state power conversion." Railway Gazette International. Vol. 129 no. 12 (December 1973):459-461.

Energy savings through the use of thyristor choppers and blended regenerative/rheostatic braking schemes.

Économie d'énergie réalisée grâce à l'utilisation des circuits hacheurs à thyristor et des systèmes de freinage par régénération ou par rhéostat combinés.

10368

"Signalling and communications for Korea's first electrified lines." Railway Gazette International. Vol. 129 no. 12 (December 1973): 472.

10369

Smart, C.K. "Carol Automatic Railway doubles its capacity." Railway Gazette International. Vol. 129 no. 11 (November 1973): 434-437.

Describes how double-tracking coupled with improvements to catenary and signalling have almost doubled the capacity of the Carol Lake Automatic Railway in Labrador.

Ce rapport montre comment les doubles voies associées à des améliorations à la caténaire et à la signalisation ont presque doublé la capacité du Chemin de Fer Carol Lake Automatic au Labrador.

10370

Meyer K. "Swiss Federal Railways perpetuate modern conventional electric-traction techniques for its latest 8,000 kW locomotives." Rail Engineering International. Vol. 3 no. 8 (October 1973): 385-392.

10371

Horiki, K., M. Ichikawa and E. Yasumatsu. "Measuring instrument of trolley wire residual diameter by use of I.T.V. (Report 2)." Railway Technical Research Institute Quarterly Report. Vol. 14 no. 3 (September 1973): 163-164.

10372

Saijo, T. "Development of feeding systems for preventing the adhesion of ice or snow to contact wire." Railway Technical Research Institute Quarterly Report. Vol. 14 no. 3 (September 1973): 155-156.

The Shin Kansen Railway describes how ice or snow adhering to contact wire interferes with current collection and discusses preventative measures.

Le chemin de fer Shin Kansen démontre comment la glace ou la neige adhèrent au fil de contact nuisant ainsi au captage du courant. Discussion des mesures préventives.

10373

Saijo, T., S. Hamayose and H. Inoue. "The grounding fault current and inductive interference of the ultra-high voltage transmission line utilizing railway land." Railway Technical Research Institute Quarterly Report. Vol. 14 no. 3 (September 1973):151-154.

Fault current and inductive interference of ultra-high voltage transmission lines paralleling the railway.

Courant de défaut et perturbations inductives des lignes de transmission ultrahaute tension en parallèle avec la voie.

10374

"Investigation of voltage transients and spikes in direct current rapid transit systems." Final Report. Philadelphia, Pennsylvania. Boeing Company Vertol Division, Surface Transportation Systems Department. (June 1973):256 pages. Report no. DI74-10017-1.

Describes and evaluates observed third-rail shoe transient and spike voltages.

Description et évaluation des surtensions transitoires observées au patin du rail de contact.

10375

Stickler, J.J. "Evaluation of non-contact power collection techniques." Final Report. Cambridge, Massachusetts. Transportation Systems Center. (July 1972):46 pages. Report no. DOT-TSC-FRA-72-7.

Evaluates four basic non-contacting techniques of power collection for future high speed ground transportation systems.

Évaluation de quatre techniques de base de captage de l'énergie sans qu'il y ait contact, qui seront utilisées dans les transports à grande vitesse au sol de l'avenir.

10376

Simon, P. and F. Ricour. "Saint-Cyr - Plaisir-Grignon Electrification." Revue Générale des Chemins de Fer. (February 1973):101-106.

Reasons behind the electrification of 11 km of suburban track on the Paris-Granville line.

Motifs de l'électrification de 11 km de voie suburbaine de la ligne Paris-Granville.

10377

Faucher, J. and R. Hanicotte. "Contact rail replaced by catenary in the Maurienne." Revue Générale des Chemins de Fer. (July 1973):450-457. (In French).

Technical justification of replacing the third rail by a catenary from Chambéry to Modane.

Décisions techniques qui ont motivé le remplacement du rail de contact par une caténaire de Chambéry à Modane.

10378

Jay, A. "A new line for a new town: the Evry Branch." Revue Générale des Chemins de Fer. (April 1973):233-237. (In French).

Civil engineering an 805-metre tunnel and a viaduct about 650 metres long, the stations and the new equipment for the Evry Branch Line.

Génie civil exigé pour un tunnel de 805 mètres et un viaduc d'environ 650 mètres les stations et le nouveau matériel utilisé pour la ligne d'embranchement d'Evry.

10379

Guilmard, A. "Orsay-Invalides Junction Line." Revue Générale des Chemins de Fer. (April 1973). (In French).

Difficulties involved in construction because of the 1,500 V catenary on the Orsay side and 750 V third rail on the Invalides side.

Difficultés survenues dans la construction de cette fonction à cause de la caténaire de 1500 V du côté d'Orsay et du rail de contact de 750 V du côté des Invalides.

10380

Misons, H. "An example of modernisation: Group II from Paris-Saint-Lazare to Versailles and Saint-Nom-de-la-Bretèche." Revue Générale des Chemins de Fer. (January 1973):222-225. (In French).

Measures taken to modernize the operation of these lines which were electrified as a 750 V third-rail system between 1924 and 1931.

Mesures prises pour moderniser le fonctionnement de ces lignes qui ont été électrifiées à 750 V sur rail de contact entre 1924 et 1931.

10381

Prud'homme, A. and O. Weber. "Technical aspect of high-speed train operation: track and electric installations on high-speed lines." Travaux. (August 1973):26-46. (In French).

Problems of running at 260-300 km/h are discussed.

Discussion des problèmes de circulation à des vitesses de 260 à 300 km/h.

10382

Cojan, M. "A study of the effect of the wind on the overhead contact line conductors." Revue Générale de l'Électricité. (February 1973):5 pages. (In French).

Dynamics of a traction overhead span in relation to the wind and stresses transmitted to the supports.

Dynamique d'une portée de caténaire de traction en fonction du vent, et des tensions transmises aux supports.

10383

"Electrification." Progressive Railroading. Vol. 16 no. 3 (May 1973): 4 pages.

Electrification of the Black Mesa and Lake Powell Railroad.

Électrification du chemin de fer Black Mesa et Lake Powell.

10384

"Three 50-kV units are world's first." Railway Locomotives and Cars. Vol. 147 no. 1 (April 1973):2 pages.

The 6,000-hp E60 units operate under a nominal 50 kV catenary and can operate on any voltage down to 25 kV.

Les unités E60 de 6000 Hp fonctionnent par caténaire à une tension nominale de 50 kV, et elles peuvent aussi fonctionner à des tensions aussi basses que 25 kV.

10385

Reynolds, A.J. and P.G.A. Crick. "Waves in the periodic overhead-conductor systems of electrified railways." Institution of Electrical Engineers Proceedings. Vol. 120 no. 7 (July 1973):766.

Describes pantograph - OCS interaction.

Description de l'interaction pantographe - caténaire.

10386

"Renfe modernises to provide a better service." Railway Gazette International. Vol. 129 no. 10 (October 1973):3.

Describes improvements to track, telecommunications, signalling and electrification of the Spanish National Railways.

Description des améliorations de la voie, des télécommunications et de la signalisation, et de l'électrification des chemins de fer espagnols.

10387

Lercy, J. and S. Guibereau. "Experiments with chopper equipment-KESAR." Revue Générale des Chemins de Fer. (January 1973): 6 pages. (In French).

Describes experimental electronic commutators for supply and regeneration.

Description des commutateurs électroniques expérimentaux utilisés en alimentation et régénération.

10388

"The chopper in D.C. electric traction. Choppers on the SNCF." Revue Générale des Chemins de Fer. (January 1973):23 pages. (In French).

Describes the fundamental principles of the chopper, characteristics of its components and the role of the self capacity filter.

Description des principes fondamentaux du circuit hacheur, des caractéristiques de ses composants et du rôle du filtre de capacité propre.

10389

Cooper, B. "Thyristors for high-speed traction." Modern Railways. (January 1973):2 pages.

A general description of equipment supplied by ASEA for electric traction of the Advanced Passenger Train (APT).

Description générale du matériel fourni par le ASEA pour la traction électrique du train de voyageurs moderne.

10390

"West Coast electrification: progress in Scotland." Modern Railways. Vol. 30 no. 301 (October 1973):388-392.

10391

Sato, T. "Recent application of thyristors to JNR rolling stock." Japanese Railway Engineering. Vol. 12 no. 2:4-8.

An introduction of application of thyristors to Japanese National Railroads equipment.

Introduction de l'utilisation des thyristors dans l'équipement des chemins de fer nationaux japonais.

10392

"DB's Class 151 goes into series production." Railway Gazette International. Vol. 129 no. 9 (September 1973):349-350.

Discusses the need for a more powerful electric freight locomotive than DB's standard Class 150.

Discussion du besoin d'une locomotive électrique de train de marchandises plus puissante que la classe régulière 150 de DB.

10393

"Hardware for high speed in 1973." Railway Gazette International. Vol. 129 no. 9 (September 1973):337-343.

A new generation of electric multiple units (EMU) is analyzed.

Analyse d'une nouvelle génération d'unités multiples électriques (EMU).

10394

Myers, E.T. "Energy: are the railroads on the right track?" Modern Railroads. Vol. 28 no. 8 (August 1973):7.

Examines energy consumption and production.

Étude de la production et de la consommation d'énergie.

10395

Goldring, A.G. and A.D. Suddards. "Development of overhead equipment for British Railways 50 Hz A.C. electrification since 1960." Institute of Electrical and Electronics Engineers Proceedings. Vol. 118 no. 8 (August 1971):13 pages.

Overhead equipment development is reviewed.

Mise au point de matériel caténaire.

10396

Gladigau, R. "The performances of electric locomotives." Elektrische Bahnen. (October 1972):9 pages. (In German).

A performance analysis of electric locomotives in service.

Analyse du fonctionnement des locomotives électriques en service.

10397

Kasai, K. "Japanese National Railways high-speed electric test trains for 250 km/h evaluation for the Shanransen nationwide scheme." Rail Engineering International. Vol. 3 no. 7 (September 1973): 3 pages.

10398

"As BR Anglo-Scottish electrification reaches Preston, signalling and traction modernisation near Fruition." Rail Engineering International. Vol. 3 no. 7 (September 1973):4 pages.

Locomotives, a telecommunications network, colour-light signalling, route-relay interlocking, computerized train reporting and hotbox-detection are addressed.

Discussion sur les locomotives électriques, les télécommunications, la signalisation couleur-lumière, l'interconnexion route-relais, les trains automatisés et la détection des boîtes chaudes.

10399

"Swiss three-phase converter experiment." Modern Railways. Vol. 30 no. 300 (September 1973):2 pages.

Design and construction of single-phase AC commutator motors is outlined.

Design et construction des moteurs à collecteur.

10400

"Electric traction on the South African Railways." Modern Railways. Vol. 30 no. 300 (September 1973):2 pages.

South African Railway's 20,000 track-miles of 3 kV electrified railway at 3 kV.

Description de 20,000 milles de voies ferrées électrifiées à 3 kV des chemins de fer sud-africains.

10401

"BR research catenary 'doubles' train speeds." Modern Railways.
Vol. 30 no. 298 (July 1973):269-271.

A specially designed catenary system is a vital part of investigations into the problems of power collection by high-speed electric trains of the future.

Système caténaire conçu dans un but particulier, qui constitue une partie vitale de l'étude des problèmes de captage de courant des trains électriques à grande vitesse de l'avenir.

10402

"West Coast main line gets 5000 HP electric locomotives." Railway Gazette International. Vol. 129 no. 7 (July 1973):268-270.

Describes British Railway's 25 kV AC electric locomotives.

Description des locomotives électriques de 25 kV c.a. des chemins de fer britanniques.

10403

"Custom equipment builds first high-voltage electric railroad." Engineering News-Record. Vol. 191 no. 6 (August 1973):22-24.

Describes the construction of the \$52.5 million turnkey railroad for the Salt River Project (SRP).

Description du chemin de fer clefs en main de 52,5 millions de dollars pour le "Salt River Project" (SRP).

10404

"50 kV electrification for Black Mesa." Rail Engineering International. Vol. 3 no. 6 (July 1973):287-288.

Voltage fed from one substation on a fully-automated line handling 3,000-ton coal trains.

Une sous-station fournit la tension à une ligne totalement automatisée où circulent des trains de charbon de 3000 tonnes.

10405

"Behaviour of pantographs and overhead equipment at speeds higher than 160 km/h. SNCF tests at very high speed (single-phase traction current)." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (October 1968):22 pages. Report no. A84/RP 5/E.

10406

"Behaviour of pantographs and overhead equipment at speeds higher than 160 km/h. High speed tests conducted by the SNCF on 1.5 kV DC systems." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (November 1967):32 pages. Report no. A84/RP 4/E.

Describes the dynamic behaviour of the overhead system, particularly resonance, under the effect of high-speed traffic, and ways of minimizing adverse effects.

Description du comportement dynamique des caténaires, surtout la résonnance, sous l'effet de trafic à grande vitesse, et des moyens d'en minimiser les inconvénients.

10407

"Behaviour of pantographs and overhead equipment at speeds higher than 160 km/h. Static tests of the FS." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (November 1967):16 pages. Report no. A84/RP 3/E.

Discusses an improved conventional type of overhead contact system.

Examen d'un type ordinaire amélioré de système de contact caténaire.

10408

"Behaviour of pantographs and overhead equipment at speeds higher than 160 km/h. Test runs on the FS with more than one pantograph." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (October 1966):39 pages. Report no. A84/RP 2/E.

Describes results obtained during high-speed test runs.

Description des résultats obtenus pendant les périodes d'essais grande vitesse.

10409

"Data transmission by means of railway telephone circuits at speeds exceeding 600 bauds. Influence of the Western Electric dispatching system and of motive power units with 'thyristor' firing-angle control of telephone circuits intended for data transmission." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (April 1970):101 pages. Report no. A76/RP 8/E.

A description of the composition and layout of the Western Electric dispatching system and interference by motive power units with thyristor firing-angle control.

Description de la composition et de l'encombrement du système de régulation Western Electric et des perturbations causées par les unités de traction à commande de l'angle d'allumage du thyristor.

10410

"Wear of contact strips and of the overhead equipment when using metallic or composite contact strips. General survey - comparison and analysis of the line. Tests - conclusions and recommendations." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (April 1971):29 pages.

10411

"Wear of contact strips and of the overhead equipment when using metallic or composite contact strips. Recommendations for the construction of pantographs for powered vehicles used in international traffic." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (April 1970):11 pages. Report no. A69/RP 4/E.

10412

"Wear of contact strips and of the overhead equipment when using metallic or composite contact strips. Line tests: Part 1." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (April 1969):27 pages. Report no. A69/RP 3/E.

10413

"Wear of contact strips and of the overhead equipment when using metallic or composite contact strips. Second enquiry report." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (October 1966):11 pages. Report no. A69/RP 2/E.

10414

"Wear of contact strips and of the overhead equipment when using metallic or composite contact strips." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (October 1963):12 pages. Report no. A69/RP 1/E.

10415

"Wear of contact strips and of the overhead equipment when using metallic or composite contact strips. Line tests: Part 2." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (April 1971):32 pages. Report no. A69/RP 5/E.

10416

"Protection of the installations and electric motive power units against the effects of overvoltages. General survey of the different solutions for protection. Future trends and questions not yet resolved." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (April 1970): 20 pages. Report no. A50/RP 12/E.

10417

"Protection of the installations and electric motive power units against the effects of overvoltages. Service tests on different types of arresters for 1500 and 3000 volt sub-stations, paralleling points and vehicles." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (April 1974): 37 pages. Report no. A50/RP 11/E.

10418

"Protection of the installations and electric motive power units against the effects of overvoltages. Tests concerning the propagation of impulse voltages on 1500 and 3000 volt overhead contact systems." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (October 1968): 27 pages. Report no. A50/RP 10/E.

10419

"Protection of the installations and electric motive power units against the effects of overvoltages. Arcing tests on catenary insulations." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (November 1967): 24 pages. Report no. A50/RP 9/E.

10420

"Protection of the installations and electric motive power units against the effects of overvoltages. Definition of the constituent parts of the equipment to be protected against overvoltages." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (October 1966):19 pages. Report no. A50/RP 7/E.

10421

"Protection of overhead contact systems against the effects of atmospheric discharges. Internal voltage surges caused by the operation of fuses on 3 dV and 1.5 kV direct current electric traction systems." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (April 1963): 30 pages. Report no. A50/RP 2/E.

10422

"Protection of traction installation against over-voltage. Tests made with horn type lightning arresters on direct current overhead contact systems." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (March 1962): 39 pages. Report no. A50/RP 1/E.

Three different types of over-voltage arresters (horn type, non-linear resistor type and condenser type) are discussed.

Trois différents types de protecteurs contre les surtensions (à corne, à résistance non-linéaire et à condensateur) sont examinés.

10423

"Application of thyristors in railway technology: consequences and remedies. Tests with a Series 420 16-2/3 Hz AC trainset equipped with different asymmetric thyristor bridges with controlled wave turn-off." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (April 1975):26 pages. Report no. A122/RP 15/E.

10424

"Electronic test installation (Vienna Arsenal). Tests made at the electronic test installation in the year 1972/73 (from 1st September 1972 to 31st August 1973)." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (October 1974):99 pages. Report no. AZ32/RP 6/E.

Focuses on the continuation of intensive testing of interference on railway telephone lines from thyristor locomotives and the extension of the MODEM test methods.

Le rapport vise la poursuite d'essais intensifs sur les perturbations causées sur les lignes téléphoniques des chemins de fer par les locomotives à thyristor, et l'expansion des méthodes d'essais avec MODEM.

10425

"Application of thyristors in railway technology: consequences and remedies. Investigation of interference in track circuits from static converters used for electric passenger train heating." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (April 1975):30 pages. Report no. A122/RP 18/E.

10426

"Application of thyristors in railway technology: consequences and remedies. Progress of work and summary of results relating to interference from thyristor control systems." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (October 1974):22 pages. Report no. A122/RP 16/E.

10427

"High power traction current collection at high speed. Dynamic behavior of the 'Overhead contact-pantograph' system. Comparison between results of BR simulations and SNCF track tests." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (October 1974):27 pages. Report no. A129/RP 1/E.

10428

Baumann, A. "Interference of magnetic axle-counter contacts by magnetised goods wagons." Signal und Draht. Vol. 75 no. 3 (March 1983):53-54. (In German).

10429

"Application of thyristors in railway technology: consequences and remedies. Studies with DC chopper controlled trainsets. Tests on the NS 1.5 kV DC Power Supply System." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (October 1974):36 pages. Report no. A122/RP 12/E.

10430

Baekelandt, P.J. "Calculation programs for catenary supports."
Third ORE Colloquium. 1973. Amsterdam.

Computer calculation of strength and stability of foundations
of four different types of overhead contact system masts of
the Belgian electrified network.

Calcul informatisé de la résistance et de la stabilité des
fondations de quatre différents types de mâts du système
caténaire du réseau électrifié belge.

10431

Cardwell, E.A.C. "Dynamic analysis of overhead current collection
for electric traction." Third ORE Colloquium. 1973. Amsterdam.

High-speed current collection is discussed.

Le captage de courant à grande vitesse est examinée ici.

10432

Sundstrom, L. "Use of computers for optimal design of thyristor
locomotives." Third ORE Colloquium. 1973. Amsterdam.

10433

"Application of thyristors in railway technology: consequences and
remedies. Studies of A.C. thyristor locomotives for 15 kV 16 2/3
cycles and the effect on 100 Hz track-circuit installations
(tests with OBB locomotive 1043)." Utrecht, Netherlands.
International Union of Railways; Office for Research and Experiments.
(April 1974):30 pages. Report no. A122/RP 13/E.

10434

Bauer, K.H. "High-Speed tests of DB on the Gutersloh-Neubeckum
section of line for research into components of the overhead
contact system/pantograph system." Utrecht, Netherlands.
International Union of Railways; Office for Research and
Experiments. (June 1977):27 pages. Report no. DT 62 (A129).

10435

"High power traction current collection at high speed. Heating and load
capacity of the overhead lines under continuous loading." Utrecht,
Netherlands. International Union of Railways; Office for Research
and Experiments. (April 1976):23 pages. Report no. A129/RP 6/E.

10436

"Application of thyristors in railway technology: consequences and remedies. Effect of thyristor-controlled motive power units on 25 kV, 50 Hz power supply installations of CSD." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (April 1976):25 pages. Report no. A122/RP 21/E.

10437

"Application of thyristors in railway technology: consequences and remedies. Thyristor chopper control and harmonic current in traction supply systems. Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (April 1976):29 pages. Report no. A122/RP 19/E.

A theoretical study of factors which determine the magnitude and frequency of AC current in the power rails for various conditions of DC chopper operation.

Étude théorique des facteurs qui déterminent l'intensité et la fréquence du courant alternatif dans les rails de puissance dans différentes conditions de fonctionnement du circuit hacheur c.c.

10438

"High power traction current collection at high speed. Computer program for determining power transmission in overhead lines." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (April 1976):21 pages. Report no. A129/RP 5/E.

A computer program to calculate power in the overhead systems and temperature increase at substations.

Description d'un programme machine de calcul de la puissance dans les systèmes caténaires, et de l'augmentation de température dans les sous-stations.

10439

"High power traction current collection at high speeds. Light AC overhead contact equipment for high power collection at speeds up to 300 km/h." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (October 1975): 11 pages. Report no. A129/RP 2/E.

Recommendations for the design of light overhead equipment and pantographs for current collection at speeds to 300 km/h.

Recommandations au sujet du design de l'équipement caténaire léger et des pantographes capables de capter le courant à des vitesses atteignant 300 km/h.

10440

"High power traction current collection at high speeds. Questionnaire relating to overhead line types, power supply and protection." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (October 1975):12 pages. Report no. A129/RP 3/E.

Contains information about different types of overhead lines, protection against overvoltages, methods used to calculate permissible power and means for increasing it.

Ce rapport contient des renseignements sur différentes lignes caténaïres utilisées, la protection contre les surtensions, les méthodes utilisées pour calculer la puissance permise et les moyens de l'augmenter.

10441

"High power traction current collection at high speeds. Power collection by an electric arc." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (October 1975): 48 pages. Report no. A129/RP 4/E.

Various possibilities of power transfer from a fixed to a moving installation.

Différentes possibilités de transfert de l'énergie d'une installation fixe à une installation mobile.

10442

"Protection of installations and electric motive power units against the effects of overvoltages. Comparison in service of different types of lightning arrestor for 1500 V and 3000 V overhead contact systems." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (November 1967):18 pages. Report no. A50/RP 8/E.

10443

"Protection of installations and electric motive power units against the effects of overvoltages. Tests on non-linear resistor type arresters (1500 V DC) and on capacitor type arresters (1500 V and 3000 V DC)." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (October 1965):25 pages. Report no. A50/RP 6/E.

10444

"Protection of installations and electric motive power units against overvoltage. Enquiry on the protection of alternative current installations and motive power units against overvoltage." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (October 1964):45 pages. Report no. A50/RP 5/E.

10445

"Protection of installations and electric motive power units against the effects of overvoltages. Tests in service on surge diverters and horn gap arresters (3000 V direct current)." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (March 1964):19 pages. Report no. A50/RP 4/E.

10446

"Protection of installations and electric motive power units against the effects of overvoltage. Tests on surge diverters (1500 V and 3000 V direct current)." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (March 1964): 14 pages. Report no. A50/RP 3/E.

Horn gap arresters and surge diverters tested under service conditions.

Parafoudres à cornes et protecteurs contre les surtensions vérifiés en service.

10447

"Disturbances caused in the supply and distribution network by electric traction systems." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (October 1964): 19 pages. Report no. A38/RF/E.

Investigations of disturbances to the power supply network and its customers by 25 kV single-phase load feeds of railways.

Recherches sur les perturbations causées au réseau d'alimentation et ses clients par l'alimentation des charges monophasées 25 kV des chemins de fer.

10448

"Pantograph contact strips. Description of the test apparatus for measurements of wear. Summary of the first test results." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (January 1956):14 pages. Report no. A2/CR 1/E.

10449

"Section insulators for overhead equipments." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (June 1960):21 pages. Report no. Alb/RP 3/E.

The behaviour of various section insulators to provide data for the development of new prototypes and improvement of existing ones.

Examen du comportement de divers isolateurs de section pour obtenir les données nécessaires à la mise au point de nouveaux prototypes et à l'amélioration des types existants.

10450

"Calculation of catenary masts and foundations." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (February 1975):34 pages. Report no. A1a/RP 1/E.

Tests to study overturning isolated cylindrical and parallel piped foundations for supporting masts of overhead systems.

Les essais ont pour but d'étudier le renversement des fondations parallélépipèdes des et cylindriques isolées du support des mâts de suspension des fils de contact des systèmes caténares.

10451

"Standardisation of catenary construction: section insulators." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (August 1954):12 pages. Report no. A1b/CR 1/E.

10452

"Behaviour of pantographs and overhead equipment at speeds higher than 160 km/h. Static tests carried out by the SNCF." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (October 1968):25 pages. Report no. B84/RP 6/E.

A study of overhead contact systems at high speeds to determine the influence of various parameters on the fundamental characteristics of the system.

Étude des systèmes caténares à grande vitesse pour déterminer l'influence des différents paramètres sur les caractéristiques fondamentales du système.

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"Application of thyristors in railway technology: consequences and remedies. Interference from chopper controlled locomotives: investigations on the 1.5 kV SNCF system." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (April 1975):43 pages. Report no. A122/RP 17/E.

Describes conditions, under which high power chopper controlled vehicles may be used in normal services without causing interference in signalling and telecommunications systems.

Description des conditions selon lesquelles les véhicules commandés par circuit hacheur à haute puissance peuvent être utilisés en service normal sans causer de perturbation dans les systèmes de signalisation et de télécommunications.

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"Application of thyristors in railway technology: consequences and remedies. Addition of psophometrically weighted interfering currents produced by several thyristor-controlled AC tractive units." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (October 1972):25 pages. Report no. A122/RP 5/E.

Studies the extent to which interfering currents increase when several thyristor-controlled units are in a section fed from the same supply point.

Ce rapport montre jusqu'à quel point les courants perturbateurs augmentent, lorsque plusieurs unités commandées par thyristor sont utilisées dans une section alimentée par le même point d'alimentation.

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"Application of thyristors in railway technology: consequences and remedies. Tests to compare thyristor-controlled tractive units for 16 2/3 Hz on the same test track." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (October 1972):41 pages. Report no. A122/RP 4/E.

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"Application of thyristors in railway technology: consequences and remedies. Effects caused by 16 2/3 thyristor-controlled motive power units on 100 Hz track circuits with motor-type relays." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (October 1971):16 pages. Report no. A122/RP 2/E.

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"Behaviour of the pantographs and the overhead equipment at high speeds. Stationary current collection (1500 V direct current)." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (April 1963):10 pages. Report no. A3/RP 8/E.

The maximum current which can be collected without difficulty by a pantograph is discussed.

Il est question dans ce rapport du courant maximal que peut capter sans difficulté le pantographe.

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"Behaviour of the pantographs and the overhead equipment at high speeds. The quality of contact as a function of the aerodynamic upward force and the effective mass of the moveable portion of the pantograph." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (April 1963): 12 pages. Report no. A3/RP 3/E.

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"Behaviour of pantographs and overhead contact systems at high speeds. Characteristics data on the dynamic behaviour of pantographs and overhead contact system." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (October 1962):50 pages. Report no. A3/RP 6/E.

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"Influence of glazed frost and hoar frost on the installations and electric motive power units. De-icing tests on overhead contact systems." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (June 1967):43 pages. Report no. A59/RP 4/E.

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"Influence of glazed frost and hoar frost on the installations and electric motive power units. Icing phenomena on pantographs." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (February 1965):27 pages. Report no. A59/RP 3/E.

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"Influence of glazed frost and hoar frost on the installations and electric motive power units. Tests in the low temperature cabinet." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (June 1963):23 pages. Report no. A59/RP 1/E.

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"Application of thyristors in railway technology: consequences and remedies. Signal installation interference from the operation of thyristor-controlled traction vehicles on the CSD railway system." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (October 1975):24 pages. Report no. A122/RP 20/E.

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"New forms of energy conversion." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (October 1964):26 pages. Report no. A89/RP 1/E.

This report considers four new methods of energy conversion:

- a) fuel cells;
- b) thermoelectric generators;
- c) thermionic generation; and
- d) magnetoplasma dynamic generation.

Ce rapport traite de quatre nouvelles méthodes de conversion d'énergie, en particulier:

- a) des piles à combustible,
- b) des générateurs thermoélectriques,
- c) de la production électronique et
- d) de la production dynamique de magnétoplasma.

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"Behaviour of pantographs and the overhead equipment at speeds higher than 160 km/h. Comparison and analysis of test results. Recommendations concerning the design of pantographs and overhead equipment." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (October 1970):34 pages. Report no. A84/RP 11/E.

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"Behaviour of pantographs and the overhead equipment at speeds higher than 160 km/h. Theoretical studies and tentative tests conducted by BR (dynamic behaviour)." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (October 1970):28 pages. Report no. A84/RP 10/E.

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Neruez, J. "Progress of electric traction at SNCB." Elektrische Bahnen. Vol. 81 no. 12 (December 1983):362-365. (In German).

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Traction électrique à SNCB de 1979 à la fin de 1982.

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An analysis of the power characteristics of single phase AC electrification systems.

Analyse des caractéristiques de puissance des systèmes d'électrification monophasés c.a.

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Kanzaki, T., et al. "Direct digital control PWM GTO inverter for DC 1500 V electric cars." IPEC-Tokyo International Power Electronics Conference. 1983. Tokyo, Japan. Vol. 2:1587-1598.

1200 kVA GTO inverter-fed propulsion system for DC 1500 V electric cars is described.

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Gerber, M., et al. "Series 4/4 IV prototype locomotives of the Swiss Federal Railways." Glaser's Annalen. Vol. 107 no. 10 (October 1983):355-362. (In German).

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Mechanical and electrical equipment and technical data is given.

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Tietze, C. and W. Maier. "Railway electrification in Central America." Elektrische Bahnen. Vol. 81 no. 10 (October 1983):322-326. (In German).

The energy supply system of the Costa Rican railway is described.

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Weiss, T. "The electric operation of the Swiss Railways in 1982." Elektrische Bahnen. Vol. 81 no. 10 (October 1983):319-322. (In German).

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Description de nouvelles unités de traction et d'installations d'alimentation de voies ferrées.

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Description des principales caractéristiques du système, des résultats commerciaux et de l'expérience technique.

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Chambadal, M. "Electric operation at the French National Railway Company (SNCF) in 1982." Elektrische Bahnen. Vol. 81 no. 10 (October 1983):304-313. (In German).

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Voronin, A.V. "Electric supply of electrified railroads." Moscow. Transport Publishing House. 296 pages. (In Russian).

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Koptev, A. "Installation of alternating current catenary network experience of the engineering and installation train." Moscow. Transport Publishing House. 148 pages. 83 figures. (In Russian).

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Ce livre explique les composants fondamentaux, le montage et la construction des réseaux caténaïres des chemins de fer électriques.

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Davydova, I.K., B.I. Popov and V.M. Erlikh. "Reference book for the operation of traction substations and sectioning points." Moscow. Transport Publishing House. 416 pages. 115 figures. (In Russian).

Basic information regarding equipment, apparatus and schemata for traction substations and sectioning posts, DC and AC systems is given.

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"Maintenance of catenary network devices." Electrification and Energy Systems. Vol. 4 (1978):30 pages. (In Russian).

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"Introduction of semi-conductor converters into traction substations." Electrification and Energy Systems. Vol. 4 no. 70. 34 pages. 8 figures. (In Russian).

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Tkalich, A.D. "Technical information, industrialization and mechanization of installation work during railroad electrification. (Experimental work of the 'transelectroassembly' combine)." Moscow. U.S.S.R. Ministry of Transportation Construction. 16 pages. 7 figures. (In Russian).

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Mamoshin, R.R. "Increase in energy quality on AC traction substations." Moscow. Transport Publishing House. 224 pages. 138 figures. (In Russian).

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Prontarskii, A.F. "Systems and apparatus of electric power supply." Moscow. Transport Publishing House. 272 pages. 157 figures. (In Russian).

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Planning of the catenary network, the choice of types and calculations for the catenary suspensions and supporting structures are outlined.

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Panfil, L.S., N.A. Bondarev and I.A. Belyayev. "Operation and repair of the catenary network of electric railroads." Moscow. Transport Publishing House. 240 pages. 115 figures. (In Russian).

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Biegelmeier, G. "Electrocution, voltage limits for human beings when they touch live wires, safety measures." Elektrotechnische Zeitschrift, Ausgabe A. Vol. 27 no. 17:461-464. (In German).

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Touton, R.D. "Electrification and control systems for light rail systems." Washington, D.C. Transportation Research Board. 1975:86-92. Report no. 161.

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Rachel, H. "Telecommunication cables for the first electrified line on the Korean railways." Siemens Review. No. 6 (September 1975): 223-229. (In French).

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Étude des mesures prises pour éliminer les perturbations causées par les thyristors.

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Describes South Africa's first mainline electrification.

Étude de l'électrification de la première grande ligne ferroviaire d'Afrique du Sud.

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Serdinov, S.M. "Electric traction development boosts economy and reliability." Railway Gazette International. Vol. 131 no. 12 (December 1975):453-457.

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Étude des programmes d'électrification en URSS.

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Weber, O. "Overhead catenary traction supply for the Paris-Lyon high-speed line." Rail Engineering International. Vol. 5 no. 7 (October 1975):264-266.

Line tests with pantographs and catenary variations are presented.

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Cucev, A.P. "Calculations regarding catenary carrying cables in relation to wind force." Vestnik Vniizt. Vol. 34 no. 4:14-17. (In Russian).

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Basov, J.A. "Method for expressing the results of energy and traction tests with AC static converter locomotives in terms of the nominal catenary voltage." Vestnik Vniizt. No. 1:14-17. (In Russian).

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Oester, C. "High power thyristors and their effect on the mains current. Methods of calculating the allowable power rating of chopper controls." Bulletin des Schweizerischen Elektrotech Vereins. Vol. 67 no. 5:249-255. (In German).

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Méthodes de conservation de l'énergie dans les opérations ferroviaires.

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An optimum pantograph with primary and secondary suspension for speeds up to 250 km/h is described.

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Perez, G. "New types of masts for railway electrification." Asociacion de Investigacion del Transporte-AIT. No. 7 (December 1975):30-35. (In Spanish).

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Ce document traite de la commande d'un bâti de lévitation électromagnétique pour le support et le guidage des véhicules.

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"Electrical power load program." Montreal, Quebec. Canadian Pacific Limited.

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Serdinov, S.M. "Electrification of U.S.S.R. Railways in the 1964-1974 period." U.S.S.R. Ministry of Railways. Moscow. 10 pages. 9 figures. (In Russian). (Also Published in Rail International. no. 5. (May 1976): 249-263).

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Goroshkov, J.I. "The universal high-speed sectional insulator TS.N.I.I.7MA for the catenary network of electric railroads." Vestnik Ts.N.I.I.:13-15. (In Russian).

Section insulators with polymer rod inserts are recommended.

Les isolateurs de section avec tige en polymère sont recommandés.

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Mikheev, V.P., V.T. Zharkov and I.A. Belyayev. "Determination of the parameters of pantographs with self-regulating devices, guaranteeing their stable operation in transitional regimes." Vestnik Ts.N.I.I.: 11-15. (In Russian).

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Mikheev, V.P., V.T. Zharkov and L.S. Panfil. "The automatic diagnosis of the pressure characteristics of the pantograph during operation." Omsk, U.S.S.R. Omsk Scientific Research Institute Proceeding:79-86. (In Russian).

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Mikheev, V.P., V.T. Zharkov and A.F. Drobatenko. "Effect of the force of viscous friction on oscillations of the system of sliding frames of pantographs." Omsk, U.S.S.R. Omsk Scientific Research Institute Proceeding:74-78. (In Russian).

How improvement of current collection at high speeds can be attained by the introduction of damping in the various assemblies of the current collector mechanism.

Ce document explique comment l'introduction d'amortisseurs dans les divers montages du mécanisme collecteur de courant à haute vitesse améliore le captage du courant.

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Mikheev, V.P. "Determination of the supplemental vertical displacement of the pantograph resulting from the curvature of the strip and the position of the conductor in the plane. Omsk, U.S.S.R. Omsk Scientific Research Institute Proceeding:64-73. (In Russian).

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Fundamentals of the operation and repair of the catenary systems of an electrified railway.

Éléments de base du fonctionnement et de la réparation des systèmes caténares d'une voie électrifiée.

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Gupta, K. "Immunising Delhi main interlocking ready for 25 kV 50 Hz electrification." Railway Gazette International. Vol. 133 no. 3 (March 1977):112-114.

Progressive conversion of controls so that signal equipment will not be affected by the EMI of high-voltage AC traction power.

Conversion progressive des commandes pour que l'équipement de signalisation ne soit plus touché par l'induction électromagnétique des hautes tensions c.a. de la puissance de traction.

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Uher, R.A. "Technical feasibility study of railroad electrification with high voltage (10-50 kV) direct current." Washington, D.C. Transportation Research Institute. September 1976:75 pages.

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Carbonell, A. "Spain catches up with Western Europe as traffic and investment rise." Railway Gazette International. Vol. 133 no. 2 (February 1977):49-53.

An outline of the electrification program by RENFE.

Aperçu du plus ambitieux programme d'électrification de RENFE.

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Boissonade, P. and R. Dupont. "SNCF test collection systems for high speed." International Railway Journal. (October 1975):5 pages.

The Faiveley two-stage pantograph is evaluated.

Évaluation du pantographe à deux étages de Faiveley.

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Buckel, R. "Electromagnetic interference due to locomotives with phase angle control." Elektrische Bahnen. (January 1974):19-21. (In German).

EMI from thyristor controlled locomotives into telecommunication circuits is discussed.

Étude de l'induction électromagnétique provenant des locomotives commandées par thyristor sur les circuits de télécommunications.

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Ruegg, R. "The regenerative brakes of the thyristor locomotive EE 3/3 II of the Swiss Federal Railways." Brown Boveri Review. (December 1975):554-557.

A new static converter type regenerative brake is discussed.

Étude d'un nouveau convertisseur du type freinage par régénération.

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Lisson, P. "Installation of drain transformers while electrifying goods traffic bypass in Hamburg." Elektrische Bahnen. (February 1975):28-32. (In German).

The control of earth return currents by means of drainage transformers.

Contrôle des courants de retour par la terre au moyen de transformateurs suceurs.

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"Turnoff circuit improves power factor of thyristor control." Railway Gazette International. (November 1975):428.

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Kill, E. "Electrical engineering in the track-type transportation system of the future." Elektrotechnische Zeitschrift Ausgabe A. Vol. 94 no. 12 (December 1973). (In German).

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Heidinger, M., U. Behmann and O. Zillessen. "Electrification of the railroad line between the Rivers Saar and Moselle." Elektrische Bahnen. Vol. 44 no. 11 (November 1973):242-253. (In German).

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Cobbett, D.J. "Electrification of BR West-Coast main line completed." Rail Engineering International. Vol. 4 no. 4 (May 1974):162-164.

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"Rail technology present and future - the British contribution." London, England. Strategy Limited. 230 pages.

Discusses developments of BR's electrification program.

Discussion de l'exploitation et du programme d'électrification des voies ferrées en Angleterre.

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Griffiths, A.E.T. "London to Glasgow in five hours." Railway Gazette International. Vol. 130 no. 5 (May 1974):172-174.

Discusses electrification of the southern half of British Rail's West Coast main line.

Étude de l'électrification de la moitié sud de la grande ligne de la Côte Ouest des voies ferrées britanniques.

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Campbell, I.M. "Electrification at the right price." Railway Gazette International. Vol. 130 no. 5 (May 1974):176-178.

Economies in overhead equipment design for low capacity lines operating up to 100 km/h are discussed.

Économie réalisée dans la conception de la caténaire des lignes à faible capacité fonctionnant à des vitesses atteignant 100 km/h.

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Siemens, W.H. "Railroads and electromagnetic compatibility." IEEE International Electromagnetic Compatibility Symposium. New York: 92-98.

Presents methods to achieve electromagnetic compatibility, with high voltage transmission lines and railroad electrification systems.

Aperçu de la méthode utilisée pour réaliser la compatibilité électromagnétique des lignes de transmission d'énergie avec les systèmes d'électrification des voies ferrées.

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Behmann, U. "60 years of the Loetschberg Railroad." Elektrische Bahnen. Vol. 44 no. 8 (August 1973):184-192. (In German).

The Alpine region electrified line in Switzerland is discussed.

Étude sur les chemins de fer électrifiés de la région des Alpes en Suisse.

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Zander, H. "Self-commutated rectifier to improve line conditions."
Institution of Electrical Engineers Proceedings. Vol. 120 no. 9
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Goldsbrough, J.V. "Railway re-signalling for electrification."
Journal of Science and Technology. Vol. 40 no. 3.

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Belyayer, I.A. "Pantograph of the automatically controlled system for electric rolling stock." Rail International. Vol. 4 no. 8
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Nouveau pantographe russe pour capter efficacement le courant.

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Svensson, S. "Electromagnetic compatibility between electric traction system and signalling and telecommunications at the Swedish Railways." IEEE International Electromagnetic Compatibility Symposium. New York.

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Yukawa, R. "Electromagnetic compatibility between thyristor-chopper controlled cars and electric fixed installations in Tokyo Subways." IEEE International Electromagnetic Compatibility Symposium. New York.

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Krasnobajev, N.I. "Some problems of electric transport with combined power supply." Izvestia Akademii Nauk SSSR, Energetika I Transp. No. 6 (December 1973). (In Russian).

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Problèmes d'application de l'entraînement électrique par batterie pour la traction.

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Vogel, X. "Oil-cooled traction convertors." Brown Boveri Review. Vol. 60 no. 12 (December 1973).

Locomotives equipped with oil-immersed semiconductor converters are described.

Description des locomotives pourvues de convertisseurs à semi-conducteurs dans l'huile.

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Bohli, W.U. "GE 4/4 thyristor locomotives nos. 611 to 620 of Rhaetian Railway." Brown Boveri Review. Vol. 60 no. 12 (December 1973).

Discusses locomotives equipped with thyristor phase-angle control and oil-immersed rectifiers.

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Albrecht, W. "Thyristor-controlled rheostatic braking for the Series 1042 locomotives of Austrian Federal Railways (ÖBB)." Brown Boveri Review. Vol. 60 no. 12 (December 1973).

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Yabe, Y. "Development of phase angle measuring device for thyristor controlled electric railcar." Railway Technical Research Institute Quarterly Report. Vol. 15 no. 1 (March 1974):2 pages.

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"Electrification in the Black Forest." Railway Gazette International. Vol. 130 no. 4 (April 1974):2 pages.

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Les nombreux tunnels, les courbes raides, les hauteurs libres serrées posent des problèmes particuliers dans la section entre Offenburg et Villingen du chemin de fer de la République fédérale allemande.

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"First narrow-gauge thyristor locos Pioneer adhesion gains." Railway Gazette International. Vol. 130 no. 4 (April 1974): 4 pages.

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Band, C. "Power Electronics in AC and DC traction systems." Journal of Science and Technology. Vol. 40 no. 4:9 pages.

The use of thyristors in power circuits for AC and DC traction vehicles are discussed.

Utilisation des thyristors dans les circuits de puissance c.a. et c.c. des véhicules de traction.

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"Government will have major role in any U.S. mainline electrification." Railway Age. Vol. 175 no. 7 (April 1974):31.

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Lehmann, H. "The energy-saving railway." Die Bundesbahn. Vol. 49 no. 11: 2 pages. (In German).

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"Electric locomotive construction in the U.S.S.R." Elektriceskaja i Teplovoznaja Tjaga. No. 11:4 pages. (In Russian).

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"BM & LP: first 50-kV electrification." Railway Age. Vol. 175 no. 5 (March 1974):9.

Discusses the 50 kV 60 Hz Black Mesa and Lake Powell Railroad electrification project.

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"Autotransformer feeding adopted as standard." Railway Gazette International. Vol. 128 no. 2 (February 1972): 2 pages.

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Jansa, F. "The electrification of the Czechoslovak State Railways in step the development of electric trains." Glaser's Annalen. Vol. 98 no. 2 (February 1974):41. (In German).

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Cymbor, W.P. and R.D. Smith. "Single car performance. AC propulsion project." Cleveland, Ohio. Cleveland Transit System. August 1973: 93 pages.

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Gauthier, P. and A. Blanc. "The impact of electric locomotive design on the organisation of maintenance." Institution of Electrical Engineers Conference. London, England. Report no. 50:17 pages.

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Frostberg, J. "Some disadvantages for railway administrations with electrification." Institution of Electrical Engineers Conference. London, England. Report no. 50:9 pages.

Discusses disadvantages of long-term commitment to fixed assets, inflexibility of transport capacity expansion, clearance limitations imposed by the overhead, problems of high speed power collection, the risk of accidents, and the impracticability of exchanging locomotives with other railways.

Études sur les inconvénients de l'engagement à long terme des immobilisations, la rigidité relative de l'augmentation de capacité du transport, les hauteurs limites imposées par la caténaire, les problèmes de transmission d'énergie à haute vitesse, les risques d'accident et l'impossibilité d'échanger les locomotives avec d'autres chemins de fer.

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Nogi, T. and M. Kuroiwa. "Electric traction in Japanese National Railways." Institution of Electrical Engineers Conference. London, England. Report no. 50:14 pages.

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Performance of the main line electrification between Euston, Manchester and Liverpool is discussed.

Fonctionnement de la grande ligne électrifiée entre Euston, Manchester et Liverpool.

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Discusses electrified lines of the Eastern Region London suburban network, the Scottish Region Glasgow suburban network and the AC electric multiple unit stock aspect of the London Midland Region.

Ce document traite des lignes électrifiées du réseau suburbain de la région de l'est de Londres, du réseau suburbain de Glasgow dans la région écossaise et de l'aspect du matériel à unité multiple électrique c.a. de la région London Midland.

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Butland, A.N. "Civil engineering works of the Euston main line electrification scheme." Institution of Mechanical Engineers Technical Conference. 1966. London, England. Vol. 181 part 3F: 51-64.

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Description de nouvelles lignes électrifiées 25 kV-50 Hz.

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Warder, S.B. "Railway electrification in the twentieth century." Institution of Mechanical Engineers Technical Conference. 1966. London, England. Vol. 181 part 3F:4-16.

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Deals with the suppression of high frequency harmonics, suppression of low frequency harmonics capable of having an effect on the track circuits, EMI, and improvement of the power factor.

Rapport traitant de la suppression des harmoniques hautes et basses fréquences qui peuvent nuire aux circuits de voie, de l'induction électromagnétique et de l'amélioration du facteur de puissance.

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Gupta, K. "Axle counters define block sections in electrified territory." Railway System Controls. Vol. 4 no. 11 (November 1973):5 pages.

Electronic axle counters installed in a section of railway line having 25 kV, 50 Hz electric traction is discussed.

Étude sur les compteurs électroniques fixés sur essieux installés dans une section de ligne de chemin de fer de 25 kV, 50 Hz.

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Bykadorov, A.L. and V.T. Domanskij. "Study into an energy supply system for multi-track lines." Vestnik Vniizt. No. 5 (1981):17-22. (In Russian).

Computer program to determine load for complex catenary systems.

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Cossie, A. "Choppers on the SNCF - Experimental designs." French Railway Techniques. No. 4 (1973):10 pages.

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Description de systèmes de commande à thyristor expérimentaux.

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"Application of thyristors in railway technology: consequences and remedies. Problems of interference with information system installations. Investigations into the disadvantages as regards the electromagnetic compatibility of power and telecommunications installations. Final report - Part III." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. April 1980:125 pages. Report no. A 122/RP 25.

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"Measurement of interference in railway substation filter installations and track circuits caused by traction vehicles with choppers." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. September 1978:22 pages. Report no. DT 64 (A 122) E.

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"High power traction current collection at high speeds on the Rome-Florence Direttissima Line - April 1978." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. November 1978:16 pages. Report no. DT 82 (A 129).

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"Measurement of the contact force between pantograph and overhead contact system (BR, SNCF and DB methods)." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. May 1979:15 pages. Report no. DT 83 (A 129).

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"Application of thyristors in railway technology: consequences and remedies. Technical and economic assessment of possibilities obtainable with thyristors from the user's viewpoint." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. April 1979:48 pages. Report no. A 122/RP 23, Part I.

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"Distribution of the overhead line current between rail and ground depending on the frequency and the distance from the substation." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. September 1978:38 pages. Report no. DT 72 (A 122).

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"High power traction current collection at high speed." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. October 1978:30 pages. Report no. A 129/RP 10.

Recommendations for the design of overhead equipment and pantographs for high voltage AC and medium voltage DC systems.

Recommandations au sujet du design de la caténaire et des pantographes utilisés dans les systèmes à moyenne tension c.c. et à haute tension c.a.

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"Adhesion of locomotives from the point of view of their construction and operation. Synthesis report: The current state of knowledge about wheel-rail adhesion." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. April 1978:62 pages. Report no. B 44/RP 14.

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"High power traction current collection at high speed. High current collection at the contact area between contact wire and current collector at high speed." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. April 1978: 22 pages. Report no. A 129/RP 9.

Discusses the active current transfer area between contact wire and pantograph, localised heating, current distribution at the contact area and permissible current collection limit.

Étude sur la superficie de transfert du courant actif entre le fil de contact et le pantographe, la localisation des points d'échauffement, la distribution du courant sur la surface de contact et les limites permises de captage du courant.

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"Comparative tests concerning the adhesion of 3 kV DC multiple unit trains (thyristor-controlled and conventional types)." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. December 1977:13 pages. Report no. DT 69 (B 44).

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"High power traction current collection at high speeds. Permissible current loading at the contact point between contact wire and current collector at rest and during starting." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. April 1977:33 pages. Report no. A 129/RP 8.

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"High speed testing of catenaries and pantographs in Alsace in November 1975." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (August 1977):19 pages. Report no. DT 60.

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"Use of electronic components in signalling electrical environment affecting railway signalling installations. Appendices." Utrecht, Netherlands. International Union of Railways; Office for Research and Experiments. (October 1976):95 pages. Report no. A 118/RP 10.

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Étude de la caténaire 25 kV 50 Hz et du rail qui sont raccordés à tous les 5 à 10 km à un câble coaxial d'une section transversale de 2000 mm².

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"Railroad electrification. A special bibliography." Washington, D.C. Transportation Research Board. June 1977:108 pages.

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Résumés de documents mondiaux traitant de l'électrification des chemins de fer et des locomotives électriques.

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Rohr, A. "Short-circuit protection devices in DC traction supply systems." Brown Boveri Review. Vol. 63 no. 11 (November 1976): 678-681.

Describes electronic devices for the detection of line faults in supply circuits.

Description des dispositifs électroniques de détection des dérangements de ligne dans les circuits d'alimentation.

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Danzer, Z. "Resonance filters for AC locomotives." Elektrotechnicky Obzor. Vol. 64 no. 1:24-30. (In Czechoslovakian).

Analyses the possibilities of resonance filter in AC locomotives to mitigate EMI of wire telecommunication.

Analyse des possibilités d'un filtre de résonance dans les locomotives c.a. pour atténuer l'induction électromotrice des communications par fil.

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Kostenko, M.P., et al. "Problems in the electrification of railroads." Power Engineering. Vol. 14 no. 3:44-48.

An historical analysis is given.

Analyse historique.

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Cooper, B. "AC traction comes of age." Electrical Review. Vol. 201 no. 5 (July 1977):16.

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Lisson, P. "Generation of traction current for the first time in a nuclear power plant: the joint nuclear power plant." Elektrische Bahnen. Vol. 48 no. 3 (March 1977):58-66. (In German).

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Overhead contact system and power supply are described.

Description du système caténaire et de l'alimentation.

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Linder, D. and R.M. Goodall. "A magnetically suspended vehicle." Institution of Electrical Engineers 2nd Conference on Advances in Magnetic Materials and their Application. 1976. London, England. 16 pages.

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"Technical proceedings of the international railroad technology transfer seminar." 1977. New Orleans, Louisiana, 62 pages.

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Szepek, B. and P. Schmidt. "Increasing the loading strength of copper overhead contact wires." Hochschule f Verkehrs F List Wissenschaft Zeitschr. Vol. 24 no. 1:159-171. (In German).

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Kahler, P. and J. Otto. "Characteristics of the second generation of electric motive power units." Hochschule f Verkehrs F List Wissenschaft Zeitschr. Vol. 24 no. 1:145-154. (In German).

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Goroshkov, J.I. "Improvements in the current capturing and traction systems on electrified lines for speeds of up to 200 km/h." Zeitschrift der OSSH. Vol. 20 no. 3:6-12. (In German).

Addresses metallurgical composition of contact wires, pantograph shoes, design of catenaries and pantographs, measurement of pantograph contact pressure and contact wire wear.

Ce rapport concerne la composition métallurgique des fils de contact, les semelles de pantographe, le design des caténaires et des pantographes, la mesure de la pression de contact du pantographe et à l'usure des fils de contact.

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Hobbs, A.E.W. "Accurate prediction of overhead line behaviour." Railway Gazette International. Vol. 133 no. 9 (September 1977): 339-343.

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Siemens, W.H. "Sishen to Saldanha: first major 50 kV scheme." Railway Gazette International. Vol. 133 no. 9 (September 1977):333-335.

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"State-Backed bodies compete for maglev transport prize." New Civil Engineer. No. 248 (June 1977):18-19.

Japanese rail and airline companies are independently developing high speed, noiseless, pollution-free transport systems using magnetic levitation and the linear induction motor.

Les compagnies aérienne (JAL) et ferroviaire (JNR) japonaises travaillent séparément à la mise au point de systèmes de transport à haute vitesse, silencieux et non polluants utilisant la lévitation magnétique et le moteur à induction linéaire.

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Describes designs of both magnetically levitated and wheeled vehicles and their guideways and compares them in both technical and economic terms.

Description du design de véhicules sur roues et à lévitation magnétique et de leur guide. Comparaison des deux systèmes en termes techniques et économiques.

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Burke, P.E. and T. Akinbiyi. "Design of flat ladder and coil guideway systems for high speed trains." Joint Magnetism and Magnetic Materials/International Magnetics Conference. 1976. Pittsburgh, Pennsylvania:882-884.

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Schaaf, P. "Future of electric power supply of the Swiss Railroads." Elektrische Bahnen. Vol. 48 no. 1 (January 1977):22-26. (In German).

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Ankersomit, J.E. "The thyristor and the electric traction." Elektrotechnik. Vol. 55 (March 1977):175-186. (In Dutch).

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Les diodes et les thyristors de puissance utilisés dans les systèmes de traction électrique et leurs réflexions d'harmoniques dans le réseau d'alimentation 50 Hz.

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Roney, M.D. and S.N. Arnold. "Annual report of the Canadian Institute of guided ground transport - 1976-1977: Research Progress." Kingston, Ontario. Canadian Institute of Guided Ground Transport. April 1977:208 pages.

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Mathieu, H., J.M. Dandonneau and G. Rouan. "Automated measuring of the thickness of catenary contact wires." Revue Générale des Chemins de Fer. (May 1977):284-288.

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Soderberg, E.A.B. and L. Gunnarsson. "RC4, a further development of ASEA's thyristor controlled locomotives." ASEA Journal. Vol. 50 no. 2:27-32.

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Yoshizawa, T. "A study on the motion of overhead contact wire at crossing." Railway Technical Research Institute Quarterly Report. Vol. 18 no. 1 (March 1977):6 pages.

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Buehler, H. "Introduction to the theory of three-phase current drive systems, Volume 1: principles Volume 2: applications." Lehrbuecher der Elektrotechnik. 2 pages. (In German).

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Greene, F.S. "Evaluation of four different rail rapid transit propulsion systems." Washington, D.C. Urban Mass Transportation Administration Urban Rapid Rail Vehicle and Systems Program. November 1976:20 pages. Report no. UMTA/URRVS-77/01.

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Ce document explique les retards apportés à l'électrification et expose les problèmes techniques qui doivent être résolus.

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"Optical-Fiber transmission in railroad future?" Progressive Railroading. Vol. 21 no. 1 (January 1978):56.

Analysis of optical-fiber cables of low transmission loss and immunity to EMI as opposed to metallic cables.

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Conséquences de la recherche et de la réalisation de l'électrification des chemins de fer aux États-Unis.

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"Electrification study of Bessemer and Lake Erie Railroad main line - Conneaut to North Bessemer." Pittsburgh, Pennsylvania. Bessemer and Lake Erie Railroad Company. February 1975:25 pages.

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Condit, C.W. "The pioneer stage of railroad electrification." American Philosophical Society Transactions. Vol. 67 (November 1977):45 pages.

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Giersberg, H. "Electric induction in railway operation." Eisenbahntechnische Rundschau. Vol. 26 no. 7-8 (July 1977): 455-460. (In German).

Discusses problems of electric induction with reference to high speed running tests.

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Meissen, W. and K. Sauer. "Three-phase operation of rail vehicles running on DC and AC contact wires." Eisenbahntechnische Rundschau. Vol. 26 no. 7-8 (July 1977):3 pages. (In German).

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The electric locomotive which offers long term cost and performance advantages despite the high initial cost of converting from diesel power is discussed.

Les locomotives électriques offrent des avantages de fonctionnement et des frais à long terme en dépit du coût initial élevé de la conversion des locomotives diesel.

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Eriksson, A.J. and R. Gay. "Overvoltage surge phenomena on the 3 kV DC overhead track equipment of the South African Railways." South African Institute of Electrical Engineers Transactions. Vol. 68 no. 7 (July 1977):159-171.

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A description of impulse speed control systems is presented.

Description du système de commande de vitesse par impulsion.

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Chopper type traction and braking equipment is described.

Description du matériel de freinage et de traction du type à circuit hacheur.

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"Electrification and energy saving." TsNIITEI. Vol. 6 no. 104:29 pages. (In Russian).

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Lundberg, C.G. "Series RM: the first thyristor locomotive on the mining railway line from Kiruna to Narvik." Elektrische Bahnen. Vol. 49 no. 2:41-46. (In German).

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Miroshnichenko, R.I. "Principles governing the development of a device for automatic contact-line voltage control in the case of regenerative braking." Vestnik Vniizt. No. 1:7-12. (In Russian).

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Koerber, J. and H. Strecker. "Three-phase current propulsion system for railway vehicles. 4th part: system for units supplied from the catenary." Elsners Taschenbuch der Eisenbahntechnik:245-279. (In German).

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Belyayev, I.A. and V. Volgin. "Pantographs and catenary suspensions for high speeds." Zheleznodorozhnyi Transport. No. 1:48-53. (In Russian).

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Schoen, A. "Problems relating to the protection of safety cables and telecommunications against corrosion due to stray current in DC installations." Signal und Schiene. Vol. 21 no. 11:380-382. (In German).

The economic relevance of corrosion protection on the DB is discussed.

Étude de la pertinence économique de la protection contre la corrosion sur le DB.

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Parameters of 15 types of magnetic supports are described.

Présentation des paramètres de 15 types de support magnétique.

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The design, characteristics and performance of this series of locomotives are discussed.

Étude de cette série de locomotives, de leurs caractéristiques et de leur fonctionnement.

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"Railway construction and operation requirements. Structural and electrical clearances. 3rd edition." London, England. Her Majesty's Stationery Office:14 pages.

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Electromagnetic interference caused by electric traction vehicles is discussed.

Perturbations électromagnétiques causées par les véhicules à traction électrique.

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Étude de l'énergie de traction requise par les caténaires, de l'électricité pour l'éclairage des voies d'évitement, le chauffage des aiguilles et l'alimentation des installations de télécommande.

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"Northeast corridor improvement project task 204: electric multiple-unit car and locomotive conversion for dual-voltage, dual-frequency operation." Washington, D.C. De Leuw, Cather-Parsons and Associates. (September 1977):287 pages. Report no. FRA/NECPD-78/7.

Describes engineering requirements of converting electric MU cars and locomotives for dual-voltage, dual-frequency operation during and after rehabilitation of the electrification system for 25 kV 60 Hz.

Ce rapport traite des exigences techniques de la conversion des locomotives et des véhicules MU pour qu'ils fonctionnent à deux fréquences et à deux tensions pendant et après la transformation du système d'électrification à 25 kV-60 Hz.

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Mathieu, H., J.M. Dandonneau and G. Rouan. "Control system under the contact wire of electric railroads." Revue Générale de l'Électricité. Vol. 86 no. 10 (October 1977):765-771. (In French).

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Masi, E. and U. Mercatali. "3000 V group E656 DC electric locomotives." Ingegneria Ferroviaria. No. 7-8 (July 1977):553-587. (In Italian).

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Revue des locomotives électriques fonctionnant à 3000 volts sur le réseau italien.

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Étude des méthodes de production automatisées, de l'utilisation considérable de l'équipement en service, et des procédés intensifs de travail et de planification.

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Ingold, R. "Kerzers converter plant of the Swiss Federal Railroad System." Elektrische Bahnen. Vol. 48 no. 5 (May 1977):110-118. (In German).

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Concept et disposition des stations de convertisseurs.

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Laskowski, M. "Localization of the main radio interference sources in electric traction vehicles." Przegląd Elektrotechniczny. Vol. 53 no. 5 (May 1977):197-201. (In Polish).

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Résultats d'une recherche pour localiser les principales sources des perturbations causées par les véhicules à traction c.c.

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Shapp, M.J. "The advantage of electrifying the nations railroads." Washington, D.C. Transportation Research Board. Report no. 180:5-8.

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Reistrup, P.H. "Amtrak's view of railroad electrification." Washington, D.C. Transportation Research Board. Report no. 180:8-9.

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Craven, E.R. "Electrification and railroad organization and operations." Washington, D.C. Transportation Research Board. Report no. 180:13-16.

Analysis of mainline railroad electrification in western United States.

Analyse de l'électrification des grande lignes de chemin de fer dans les états de l'Ouest.

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Fishbein, R. "Financial considerations of railroad electrification." Washington, D.C. Transportation Research Board. Report no. 180:16-19.

Electrification of 10,000 route miles in the U.S. having traffic density of 40 million gross tons per year is estimated to cost \$2 billion.

L'électrification aux États-Unis de 10,000 milles de route ayant une densité de 40 millions de tonnes brutes par année, est estimée à deux milliards de dollars.

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Ross, B.A. "Utility service to electrified railroads." Washington, D.C. Transportation Research Board. Report no. 180:24-27.

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Limites du déséquilibre de la tension et de la charge d'une seule phase que peut accepter sans effet nuisible l'équipement de distribution et de production d'un service public.

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Corneil, E.R. "Canadian railway electrification study: Phase 1." Washington, D.C. Transportation Research Board. Report no. 180:27-34.

A summary of benefits of electrification.

Sommaire des avantages de l'électrification.

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Étude des coûts fixes de la caténaire, des sous-stations et des raccordements aux services publics.

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Kendall, H.C. "Interference of electrification with signaling and communication systems." Washington, D.C. Transportation Research Board. Report no. 180:47-54.

Discusses EMI and other complications of railway electrification.

Étude sur l'induction électromagnétique et d'autres complications provenant de l'électrification des voies ferrées.

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Raposa, F.L. "Impact of research and development on railroad electrification." Washington, D.C. Transportation Research Board. Report no. 180:54-60.

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Perez, G. "New overhead contact system dropper connector for railway line electrification." AIT-Revista. No. 18 (October 1977):49-53. (In Spanish).

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Portefaix, A. "High speeds on the SNCF: objectives, means, results." Rail International. No. 1 (January 1978):31-49.

Describes two stages in increasing the speed of trains.

Description de deux stages de l'augmentation de la vitesse des trains.

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Uher, R.A. "The technical feasibility of railroad electrification with high voltage (10-50 kV) direct current." Joint ASME/IEEE/AAR Railroad Conference. 1978. St. Paul, Minnesota:1-13.

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Moon, C.G. and R.H. Rawson. "New electric locomotives for the Taiwan Railway Administration." Joint ASME/IEEE/AAR Railroad Conference. 1978. St. Paul, Minnesota:25-30.

Discusses the 74-2800 kW, six-axle electric locomotives for freight and passenger service.

Étude sur les locomotives électriques 74-2800 kW à six essieux destinées au service des voyageurs et des marchandises.

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Uher, R.A. and J.E. Pastoret. "Energy savings by regeneration on a proposed electrified railroad between Harrisburg and Pittsburgh." Joint ASME/IEEE/AAR Railroad Conference. 1978. St. Paul, Minnesota:31-40.

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Shimomae, T. and M. Aihara. "A study of pantograph for high speed running." Railway Technical Research Institute Quarterly Report. Vol. 18 no. 4 (December 1977):164-167.

Variation of pantograph contact force, contact wire wear and dewiring at high speed are discussed.

Étude sur l'effort de contact du pantographe, l'usure ondulatoire du fil de contact et l'interruption de contact à grande vitesse.

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Krueger, G. and H. Bohm. "Experiments with an automatic driving system on a series 111 electric tractive unit." Elektrische Bahnen. Vol. 48 no. 11:275-278. (In German).

Description of the AFB automatic driving system tested on a DB series 111 electric locomotive is given.

Description du système d'entraînement automatique AFB vérifié avec une locomotive électrique DB de la série III.

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Alonso, J.A. "Effects of electromotive forces induced by electric traction lines in railway telephone wires." AIT-Revista. No. 18 (October 1977):9-16. (In Spanish).

EMI mitigative measures are discussed.

Mesures visant à réduire les effets de l'induction électromagnétique.

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Graf, R. "Problems arising in contact line networks in connection with phase regulation of thyristor locomotives." Brown Boveri Review. Vol. 64 no. 12 (December 1977):745-750. (In French).

Causes of undesirable overvoltage are identified.

Explication des causes des surtensions indésirables.

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Bohli, W.U. "Use of transformers and smoothing coils in alternating current tractive units." Brown Boveri Review. Vol. 64 no. 12 (December 1977):724-734. (In French).

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Gerichten, F.J. "Theory of Y-suspension and optimum catenaries for electrified lines." Archiv fuer Eisenbahntechnik. No. 32:69-77. (In German).

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Whiting, J.M.W. "Chopper control of 1500 V DC traction motors." GEC Journal of Science and Technology. Vol. 44 no. 1:13-21.

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Tarasovskij, V.F. "Rational use of electric energy." Elektricheskaya i Teplovoznaja Tjaga. No. 9:24-25. (In Russian).

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Ribbons, R.T. "Running BR West Coast route on 25 kV." Railway Engineer. Vol. 2 no. 6 (November 1977):42-44.

Describes remedies for overcoming overhead blow-offs, broken rails, wheel shelling and adhesion.

Description des moyens utilisés pour empêcher la rupture des caténaires, la cassure des rails, l'écaillage des roues et le degré d'adhésion des locomotives.

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A formula to calculate elasticity in overhead equipment suspension.

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